ERA SGHRM Working Group on Skills (WG3)
"Professional Development of Researchers - Provisions for the Future"
Final 31st May 2012

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1. INTRODUCTION

1.1 Context

The overall context for this report is the target of an extra one million researcher jobs set within the Innovation Union policy to enhance the research intensity of our economies. For this extra million researchers there must be maximum opportunities for career development. Many will be using the expertise and competencies they have developed through academic research to carry out research tasks in a non-academic environment or make good use of their research skills in a non-research position.

International studies show that in many countries more than 50% of PhD graduates leave the academia to find employment in the private and public sector. A fundamental question arises as to the appropriateness of the professional development support that they have received given the wide range of employment opportunities.

There is no doubt that significant progress has been made in Europe as part of the development of the European Research Area (ERA). Concrete examples include the European Researchers Charter and Code and growth of structured doctoral education that has rapidly diffused across Europe. In this respect the US lags far behind Europe in career development for researchers. A report published in April 2012[1] by the US Council for Graduate Schools in collaboration with major companies has made the clear recommendation that there must be clearer pathways for PhD graduates into employment. It is interesting to see that at this juncture the US is only acknowledging this challenge where Europe is setting its sights on achieving the ERA by 2014.

The objective of this report is to inform the Steering Group on the full range of issues relating to professional development provision for researchers. The intent is to look to the future and identify the support researchers need to enhance their research expertise and make informed career choices. Based on the work of the Group some general conclusions are drawn along with recommendations.

1.2 Group Composition

Members include Steering Group delegates and experts specialised in skills development designated by MS or Commission. Participants also included the EUA (Council for Doctoral Education), EURODOC, DG Education and Culture and DG Employment. The WG would stay in close contact with related activities by EURAXESS.

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[1] "Pathways through Graduate School and into Careers", US Commission on Pathways through Graduate School and into Careers (www.pathwaysreport.org), 2012

1.3 Timeframe for Delivery

The WG held three meetings of the full group (2/2/12, 27/3/12, 25/4/23) and a Chairs meeting to finalise the report on 11/5/12. Deadline for the pre-final report is 24/04/2012, to be adopted by the Steering Group on 23/5/12.

1.4 Mandate

The Working Group was given the following mandate by the Steering Group:

"Rationale and Timing: According to IU Commitment #1, by the end of 2011, MS "should have strategies in place to "train enough researchers to meet their national R&D targets". Data on these strategies are currently being collected through the questionnaire developed by the contractor Deloitte and circulated to the SGHRM delegates. Following the deadline for responses of 31 October 2011, the contractor will process the data on responses including those on training strategies. This working group would use these strategies as a starting point for an analysis to verify whether they cover the training needs of researchers with their various profiles.

Concrete Deliverable(s):
1) An assessment of the aggregated effect of the MS/AC training strategies for researchers and the identification of training gaps where applicable (short report, including recommendations, of maximum 5 pages + annexes if necessary)

Focus/Goal is to assess the aggregated effect of the MS/AC training strategies for researchers in academia and Industry with the ultimate goal of identifying gaps (with respect to training needs) and developing agreed-upon recommendations.

Operational Objective is to:
- Conduct an analysis of the submitted MS (and AC) training strategies - Identify training gaps and issue recommendations."

Considerations of the WG on the mandate:

Objective: How are we making researchers more employable?

Limitations: The report will not discuss sectoral supply and demand issues at this stage, but may provide pointers for follow-up work in that direction.

Aims:

- Assist researchers in their career' changes.
- Provide recommendations through the exposition of national models of provisions for researchers' skills and an analysis of the quality and pertinence of these provisions.
- Provide a basis of information of the evolution (success) of changes in researchers' careers towards the completion of ERA (from 2000 to 2014).

2. SOURCES OF INFORMATION / DATA

There has been extensive work done in this area by a variety of organisations however it was not within the scope of the Working Group to carry out extensive in depth analysis. The group is cognisant of the OECD project underway that will be published soon[2]. Rather it relied on the expertise of the members to bring out the key points and outcomes of previous studies.

One possible source of data identified was the responses to the Deloitte Questionnaire made by the SGHRM members. Upon examination of the responses it was found that, while some information was useful, there was not a sufficient level of detail provided to be of use to this task. Moreover the summary information that would have been useful to the Working Group was not available within the timeframe of the Group's activity.

It was recognised by the Working Group that a full mapping of skills training would not feasible in the allotted time nor would it be particularly informative. The purpose of this exercise was to give an overview of activities in countries focusing on the "big picture". Group members took it upon themselves to provide data from their own countries along with some more general perspectives from the EUA and EURODOC. These and the full set of country data are given in the appendices (Austria, Finland, Germany, Ireland, Norway, Portugal, Slovenia and the UK).

The data was collected from the Working Group only as it was decided that the wider Steering Group was already involved intensively in completing the Deloitte Questionnaire. ***At this point the Working Group would welcome any further country studies from the Steering Group in order to produce a more comprehensive study.***

It is important to keep in mind that this report has limitations and as a consequence, no conclusions could be made on a number of issues. There was no data gathered on quality or relevance of training offered. This of course relates to cost as many universities offer courses "free" of charge whereas those given by private providers can be very expensive. The reality is that professional development provision does have significant costs attached when one takes into account the time spent by experts in developing and delivering these courses.

There was no investigation of sectoral demand and supply, nor of the types of researchers in general that may be required (e.g. number of engineers). This study is not about the pipeline itself but the outcome. It concerns generic researcher development, not discipline specific.

The study did not look at provision within the private sector.

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[2] *Transferable Skills Training for Researchers: Supporting Career Development and Research*, OECD 2012 in press

3. METHODOLOGY

3.1 Classification of Professional Development Provision

A challenge in gathering the data on professional development was how to present the results in a manner that would be informative. In order to analyse the skills offered to researchers the group decided to classify skills in a matrix. This matrix is spanned by the European Framework for Research Careers (EFRC) and the Researcher Development Framework (RDF) as the template for classifying professional development provision. The EFRC is now an accepted European classification for researcher categories. The RDF, developed by VITAE in the UK, has been piloted in a number of countries through the European Science Foundation (ESF) and is seen to have worked well. This, the Group agreed, was a useful framework for the classification of skills training provision.

The European Framework for Research Careers (EFRC)[3] provides a classification of careers stages for researchers. This classification is independent of sector, applying equally to the public and private.

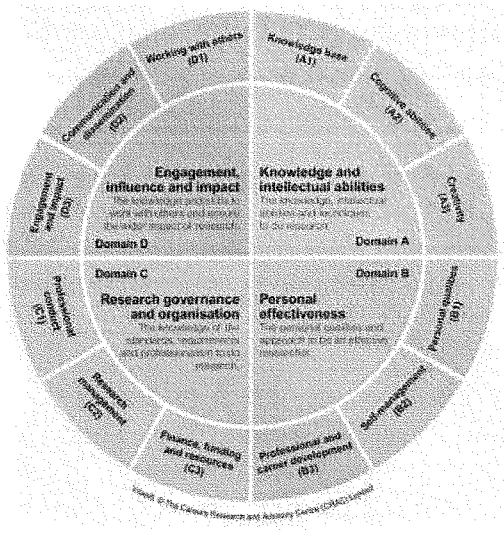
R1 First Stage Researcher (up to the point of PhD)

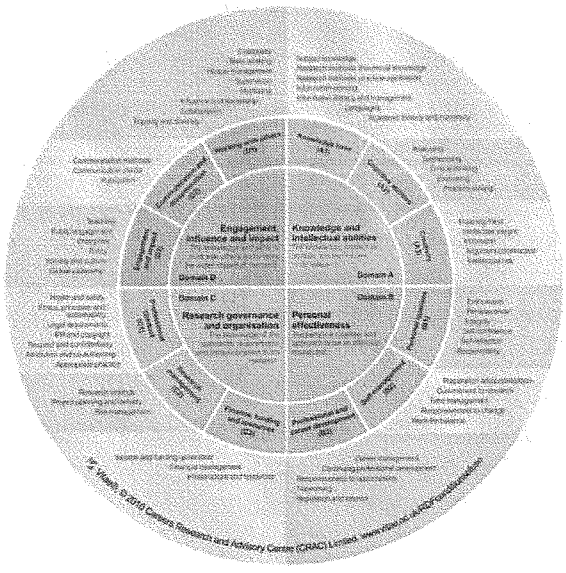
R2 Recognised Researcher (PhD holders or equivalent who are not yet fully independent)

R3 Established Researcher (researchers who have developed a level of independence)

R4 Leading Researcher (researchers leading their research area or field)

The Group agreed to classify the types of professional development using the Researcher Development Framework (RDF)[4] provided by Vitae on the knowledge, behaviours and attributes of successful researchers. This includes 4 domains and 12 types of skills:





www.vitae.ac.uk/rdf

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[3] The EFRC is most appropriate as it is based on the guiding principles of Research Excellence; core competencies linked to research; overarching framework for all sectors; transferability of the competencies and skills; not linked to any job title or career track

[4] www.vitae.ac.uk/rds

- *Engagement, influence and impact*
- *Knowledge and intellectual abilities*
- *Research governance and organisation*
- *Personal effectiveness*

The characteristics of this framework are that it provides a common language and is based on researcher self-assessment. There is a total of 63 Descriptors with phases of development and these are independent of job or career stage. In addition the RDF is concerned with skills needed by researchers inside and outside academia regardless of professional destinations.

It is important to stress that this is not intended to be a full mapping exercise. The objective is to provide as many examples as possible for the template in order to gain an overall impression of skills training.

3.2 Details of Professional Development Provision

It is important to recognise that researchers develop many competencies and expertise through doing research. It is good to supplement this with specific skills through professional development programmes. The skills can be classified using the VITAE domains; Engagement, influence and impact; Knowledge and intellectual abilities; Research governance and organization; Personal effectiveness.

Researchers are professionals with multiple career options and a good professional development provision will equip them to make a fast effective transition to a wide range of careers. That being said the core expertise of the ability to analyse and solve complex problems comes from the research experience itself.

The process of classification raised a number of issues relating to skills; how they are acquired, course content, their availability and accessibility. Professional development comes in many forms and is not confined to well-defined courses and professional accreditations. At senior level, it may come through collaborations with academics in other countries on supervision, for example. There are skills acquired through dedicated Teaching & Learning courses (including classroom, workshop and online). There are also skills acquired through on the job experience or learning by doing (e.g. teaching skills through running tutorials, supervising laboratory sessions and lecturing). This analysis predominately focuses on learned skills although, as will be seen in the examples, it does make reference to learning by doing.

The content of any skills training may range from a one-day informal event to a fully accredited professional qualification at level 9 with ECTS. The examples provided by the WG members show a wide range of course content.

Specific skills may be offered only at single institutions, at a number of linked institutions or available nationally. Of course one may have certain types of skills that are offered at single institutions but, in fact, are available on a national basis. For

example, courses on research ethics are offered at most universities and, although different in detail, can be considered to be available nationally.

Access to courses is another issue that emerged in the course of the WG investigations. In many universities, there are courses that are usually available to all researchers, for example, on research ethics. However there are also skills training that are only offered to those, for example, enrolled in a specific structured PhD programme.

There is wide variation of accreditation of courses. Courses may be compulsory or voluntary. This depends on the content and whether the researcher is part of a structured programme with mandatory training elements. It seems that compulsory training is found for the most part during doctoral research (R1).

Table 1 Matrix used by the Skills Working Group to present skills training provision

	R1 First stage researcher	R2 Recognised Researcher	R3 Established Researcher	R4 Leading Researcher
Status				
Overview				
A. Research knowledge and skills				
B. Personal effectiveness				
C. Research management				
D. Engagement, influence and impact				

A: The knowledge, intellectual abilities and techniques to do research
B: The personal qualities and approach to be an effective researcher
C: The knowledge of the standards, requirements and professionalism to do research
D: The knowledge and skills to work with others and ensure the wider impact of research
For full details see http://www.vitae.ac.uk/researchers/428241/Researcher-Development-Framework.html

The full set of results for each of the respondents is given in Appendix 3.

4. DISCUSSION OF RESULTS

4.1 Data Sources

In this section the country results along with some more general information from the European Universities Association (EUA) and EURODOC are presented. The full set of responses from the working group members for Austria, Finland, Germany, Ireland, Norway, Portugal, Slovenia and the United Kingdom are given in Appendix 3. A précis of surveys carried out by EUA and EURODOC are in Appendices 4 and 5 respectively. Upon examination of the results some patterns emerge. There is no single national body responsible for the provision of skills training in the academic sector. There are a number of policy approaches, led by the key stakeholders, government, funding agencies and universities. There is no single skills policy for all four-researcher categories. One can clearly identify strategies for PhD candidates (R1) as a distinct grouping from the other three. The R2 has some overlap with R1 in terms of skills but R3 and R4 are completely separate.

4.3 Variation with Career Category

There is a very high level of activity at PhD level (R1) covering a wide range of skills. The skills range from transferable (e.g. project management and communication) to research specific (e.g. research ethics and commercialisation). The levels of accessibility and availability vary and are linked to funding. The emergence of structured PhD programmes across Europe has brought with it a concentration on the provision of skills training for doctoral candidates (R1). This is linked to national and European policy agendas where in recent years specific funding streams have been introduced to fund structured doctoral programmes / schools.

In the ARDE 2011 survey[5] carried out by the EUA, 79 % of the respondent universities had career development services, usually transferable skills training. There were two main trends in transferable skills training identified in the survey. The first, was a comprehensive approach with a coherent offer of courses that are logically interconnected or 'à la carte'-approach where researchers could choose from a range of different courses. (Appendix 4).

In 2011 EURODOC published a survey of 7561 researchers in 12 countries that examined access to skills training. They found that at least 60% received training within / without their university. This was over 80% for 8 countries and on average was mandatory for 22%, see Appendix 5.

Given the high percentage of PhD graduates who immediately leave academia it is most important that they are equipped for a diversity of careers supported with skills training. Also it must be kept in mind that the doctorate is a university degree of the highest level and there are in place national and institutional regulations to ensure the highest quality and standards. Some of the core drivers here are the Bologna Process and Salzburg Principles, the Charter and Code along with national policy on doctoral training.

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[5] *Survey on the implementation of quality management systems at 112 European universities with ~130,000 doctoral candidates* www.eua.be/arde

It is clear from the data provided that there is a transition point at the end of R1 with a sharp decrease in professional development provision. Despite the Charter and Code being place since 2005 it impact here is somewhat limited. Moreover from Recognised Researcher (R2) through Established Researcher (R3) to Leading Researcher (R4), training is dominated by academic career skills. At one level this is not surprising as the training is taking place in universities provided for their employees. However, the real bottleneck in academic career progression is the transition from dependent to independent researcher (R2 to R3). Therefore during R2, researchers must make critical decisions to decide longer-term career plans. Yet the findings of the Working Group indicate that training opportunities for this cohort of researchers are limited. Those existing opportunities primarily focus on the academic career (e.g. teaching, mentoring and securing research funding).

At R3 Established Researcher level there are some opportunities for training in leaderships as part of the process of developing independence.

The data from these countries is summarised schematically in Table II below.

Table II Summary of the country results for skills training

	R1 First stage researcher	R2 Recognised Researcher	R3 Established Researcher	R4 Leading Researcher
Status	Student / Fellow / Employee	Fellow / Employee		
Overview	*Bologna, Salzburg, Charter and Code have driven R1* *Recognition of multiple career paths for PhD graduates*	*Charter & Code has had a low impact here*	*Continuous Professional Development for staff*	*Continuous Professional Development for staff*
A. Research knowledge and skills	*Well covered through the experience of doing research and some specific courses*	*Well covered through the experience of doing research and some specific courses*	*Not provided: no longer necessary?*	*Not provided: no longer necessary?*
B. Personal effectiveness	*Some courses but very much individually driven*	*Some courses but very much individually driven*	*Individually driven*	*Individually driven*
C. Research management	*Often well covered through specific courses*	*Some coverage through specific courses*	*Not provided: no longer necessary?*	*Not provided: no longer necessary?*
D. Engagement, influence and impact	*Focus on communication, teaching. Lack of professional development support for knowledge transfer*	*Focus on communication, teaching. Lack of professional development support for knowledge transfer*	*Focus on teaching / supervision / mentoring. Lack of professional development support for knowledge transfer*	*Some leadership provision Lack of professional development support for knowledge transfer.*

4.2 Sources of Funding

Funding agencies and universities play a central role in professional development provision for researchers. One can identify two broad approaches to supporting researchers that has a very strong influence on the quantity and quality of training. Many researchers are funded through one of two mechanisms, fellowship or project. In the first case, the individual researcher applies for funding to schemes that usually focus on career development. Along with funding for the researcher's stipend / salary, there may be funding to for skills training and career development. A good European wide example would be the Marie Curie Individual Fellowships. One can include structured doctoral programmes / schools within this category. There are of course researchers who are fulltime employees of universities and research centres. In this case, they would receive training through continuous professional development opportunities for all staff.

Often as not, researchers supported through funded projects are hired to carry out a specific piece of research. In this case it is not common to have funding available for professional development provision within the project.

It must also be recognised that many universities provide and therefore fund professional development for researchers through the normal Human Resources led continuous professional development for all employees. In this context, it was recognised that professional development provision may be used as part of career development but also within performance management for research and promotion. However it must also be recognised that this provision depends strongly on the funds available. The general professional development provided for all staff may be useful for researchers but there must also be specific provision for researchers. This can be a challenge for universities as they must cost professional development provision for a transient population of researchers.

Overall there could be said to be a piecemeal approach to funding professional development. There has been much done at doctoral level however it tapers off rapidly in R2, R3 and R4. There is no doubt that increasing professional development provision for researchers will not be possible without increased commitments from funding agencies and universities.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Based on the data gathered in this study and the background knowledge of the WG members we make the following broad conclusions:

1) Researchers are professionals with multiple career options and a good professional development provision will equip them to make a fast effective transition to a wide range of careers. That being said, it is important to emphasize that the researcher's development of core expertise of the ability to analyse and solve complex problems comes from the research experience itself.

2) In recent years, national, European and institutional policy has ensured that professional development provision for researchers is recognised as an important part of career development however gaps remain.

3) There is no single national approach in Higher Education and public research sectors for skills training. The reality is that this is a combination of approaches by government, funding agencies and universities.

4) Apart from those researchers who are permanent employees the funding mechanism (Fellowship or Project) and Human Resources policy of the university play a central role in determining if a researcher has access to professional development provision.

5) There is a wide range of professional development provision courses available however the following must be taken into account:

- Content and quality
- Accessibility
- Availability
- Cost

6) Professional development provision varies significantly in quantity and type across the different research career categories.

a. There is a very high level of activity in providing skills training for researchers at doctoral level (R1)

b. There is a sharp decrease in skills training beyond R1.

c. From Recognised Researcher (R2) through Established Researcher (R3) to Leading Researcher (R4), what little training and development exists is dominated by academic career skills.

7) Professional development provision most commonly focuses on academic related provision. Training and development in Independence, knowledge exchange and innovation - domain D - is poor, even at doctoral level.

5.2 Recommendations

In making recommendations the original aim of the Working Group should be kept in mind. These aims are;

- *Assist researchers in their career' changes.*
- *Provide recommendations through the exposition of national models of provisions for researchers' skills and an analysis of the quality and pertinence of these provisions.*
- *Provide a basis of information of the evolution (success) of changes in researchers' careers towards the completion of ERA (from 2000 to 2014).*

It would seem from the conclusions above that more needs to be done in professional development provision to give researchers greater support in making career decisions and improving their employability.

The national models presented in this report provide a good representation of activity across Europe given the country mix both in terms of size and location. Conclusions or recommendations concerning the quality of professional development provision are beyond the scope of this report. Suffice to say that, there is likely to be a wide variation in the quality of professional development provision. There is a common thread running through all of the examples of professional development provision for researchers inclined towards an academic career.

Much has been achieved across Europe since 2000 towards the ERA goals. Professional development provision is now broadly recognised as an integral component of career development for researchers. Significant progress has been made at doctoral level (R1) in providing skills training and to some extent at the next level of Recognised Researcher (R2).

Recommendation 1

There needs to be a greater focus on providing opportunities for researchers to pursue multiple career paths supported by professional development provision. While there is common recognition among policy makers, funders and universities that professional development provision is an integral part of career development:

- The European Commission should encourage that all researchers funded under its various modalities have access to professional development provision
- National funding agencies should collaborate with universities to ensure that all researchers have access to professional development provision
- Researchers should take responsibility for their own career development recognising the limited opportunities in academia and maximise their multiple career opportunities in the wider economy through professional development provision.

Recommendation 2

There is significant variation in professional development provision for different researcher categories and domain. There should be close cooperation between all stakeholders to ensure that professional development provision is appropriate for each domain and category.

- The European Commission should undertake a broad study to identify the relevant professional development provision across all researcher categories (R1-R4).

Recommendation 3

Researchers enter a wide range of careers in addition to research in academia. A key part of the development of the knowledge economy is to introduce research in a non-research environment and benefit from the ability of researchers to analyse complex problems. As a consequence training researchers just to be researchers in academia is no longer appropriate. Therefore the academic paradigm must change recognizing in full that the majority of researchers trained will pursue careers outside the university and academics need to be more engaged in knowledge exchange and innovation.

- Universities should ensure that there is a balanced professional development provision for researchers at all levels to optimise their employment opportunities
- Universities should explore opportunities for researchers to experience placements in other sectors.

APPENDIX 1

Mandate of SGHRM WG

Proposal (Version 3: 19/09/2011)[1]

Third Cycle of the SGHRM Working Groups - objectives, outcomes and profiles

Introduction

This note provides a proposal for the objectives, desired outcomes and composition of a new cycle of Working Groups (WGs) installed by the SGHRM. This is in accordance with the operational principles for these WGs (Annex I) and bearing in mind the urgency created by the Council Conclusions of the 31 May, 2011 Competitiveness Council inviting the SGHRM to support the implementation and monitoring of the relevant IU commitments, including the development of the ERA Framework.

WGs would ideally consist of 5-10 members from SGHRM delegates, topic-specific national representatives, non-governmental experts and other stakeholders. The Working Groups would be chaired by a SGHRM delegate.

During the 22 June, 2011 SGHRM meeting, and in the weeks/months that followed (until 12/09/2011), ideas were exchanged on the various topics to be dealt with in the future WG cycle while bearing in mind the following principles:

- WG should have a **concrete and well defined objective** that could be delivered within 4-6 months
- The work of the WG should have an **added value** with respect to other groups working on the same topic
- Given the human resources available, **we can not have more than 4 WGs**, including the one on Monitoring which should continue throughout the SGHRM work

Furthermore, in all WGs and where relevant, the gender aspect should be accounted for. Effort should be made to liaise with the Helsinki Group in order to ensure that the gender aspects are properly addressed where relevant.

If this proposal is accepted and successfully implemented, we would deliver **the following "products" towards the implementation of IU Commitments 1, 4 and 30 before April 2012:**

1) An inventory of initiatives taken thus far to implement the C&C principles as well as other examples of good practice not directly linked to C&C
2) Recommendations to relevant stakeholders on how to increase the effectiveness of the HRS4R process
3) Identification of the most effective policy approaches to gradually reach substantially wider access to and portability of grants

[1] This proposal only contains WG3, mandate for other WG to be found in version 3:19/19/2011

4) An assessment of the aggregated effect of the MS/AC training strategies for researchers and the identification of training gaps where applicable (short report, including recommendations, of maximum 5 pages + annexes if necessary)
5) Reliable Support for monitoring of the IU commitments

WG 3 – Researchers' Training [IU Commitment: 1]:
Starts January 2012

Rationale and Timing: According to IU Commitment #1, by the end of 2011, MS "should have strategies in place to **train enough researchers to meet their national R&D targets**". Data on these strategies are currently being collected through the questionnaire developed by the contractor Deloitte and circulated to the SGHRM delegates. Following the deadline for responses of 31 October 2011, the contractor will process the data on responses including those on training strategies. This working group would use these strategies as a starting point for an analysis to verify whether they cover the training needs of researchers with their various profiles.

Concrete Deliverable(s):
1) An assessment of the aggregated effect of the MS/AC training strategies for researchers and the identification of training gaps where applicable (short report, including recommendations, of maximum 5 pages + annexes if necessary)

Focus/Goal is to assess the aggregated effect of the MS/AC training strategies for researchers in academia and Industry with the ultimate goal of identifying gaps (with respect to training needs) and developing agreed-upon recommendations.

Operational Objective is to:
- Conduct an analysis of the submitted MS (and AC) training strategies - Identify training gaps and issue recommendations

Members[2] and Stakeholders Profile would include countries representatives specialised in skills development. Stakeholders to invite would include the EUA Council for Doctoral Education, EURODOC, BUSINESS EUROPE and EIRMA. DG Education and Culture and DG Employment would be involved. The WG would stay in close contact with related activities by EURAXESS.

[2] In addition to SGHRM delegates who should be part of each WG

APPENDIX 2

Notes on how to complete the matrix

WG SKILLS - Researcher Training Gap Template

Version 3rd April 2012

- It has been recognised that a full mapping of skills training is not feasible in the allotted time nor would it be particularly informative.
- The purpose of this exercise is to give an overview of activities in your country focusing on the "big picture".
- As we agreed at the Working Group meeting on 27th March please begin by attempting to populate the R4 category and work backwards.
- Deadline for response is 17th April in order that we may discuss this at our next WG meeting scheduled for 25th April. The report will then be finalized and sent to the Steering Group for discussion at the next SGHRM meeting on 23rd May.

1. What are the national /regional strategies/initiatives for these levels (R1 to R4)?

- *It is clear from our work to date that the question is somewhat misplaced as there is no single national skills agenda for any country.*
- *This means that the responses to the Deloitte questionnaire will not provide a complete overview. For examples, there are cases where the response has been simply to state that there is no national policy in place. In reality, there are a number of agendas relating to skills for researchers driven by different stakeholders at regional and national level. First, there is broad government policy that may manifest itself through Higher Education and / or Research policy. Secondly, there is the policy set by agencies when they provide funding for skills training. This tends to concentrate at the level of doctoral studies. Thirdly, there is the approach of universities and other organisations that host researchers.*
- *It would be helpful to outline the various skills strategies at governmental, funding agency and university level.*

2. Can you give example(s) of the main initiative(s) on these particular areas (A to D)? **IRELAND**

- *We have agreed to use the matrix spanned by the European Framework for Research Careers (EFRC) and the Researcher Development Framework (RDF) as the template for investigating skills provision. The EFRC is now an accepted European classification. The RDF, developed by VITAE in the UK, has been piloted in a number of countries through the European Science Foundation (ESF) and is seen to have worked well.*

- *This is not intended to be a full mapping exercise. The objective is to provide as many examples as possible for the template in order to gain an overall impression of skills training.*

- *The table is filled with examples from Ireland and while not being complete does give an overall impression of skills training (the full template completed before last WG meeting on 27th March is appended).*

	R1 First stage researcher	R2 Recognised Researcher	R3 Established Researcher	R4 Leading Researcher
Status	Student / Employee	Employees		
Overview	Completely restructured PhD with transferable/generic skills and advanced disciplinary courses	Many will access the R1 courses but also have access to continuous professional development opportunities through HR	Continuous professional development opportunities through HR	Continuous professional development opportunities through HR
A. Research knowledge and skills	*Graduate Certificate in Innovation and Entrepreneurship, TCD-UCD Innovation Academy (LS, A2, S1)* *GS505 Graduate Research Skills, NUI Galway (LS, A1, S2)* *'I'm nearly finished' - exploring the personal writing challenges and breakthroughs associated with completing a PhD (NAIRTL)[3] (LS, A3, S2)*			
B. Personal effectiveness	*Graduate Certificate in Innovation and Entrepreneurship, TCD-UCD Innovation Academy (LS, A2, S1)* *GS510 Publishing Research & Preparing for the Job Market, NUI Galway (LS, A1, S2)* *GSS3 Thesis Completion and Career Development, NUI Maynooth (LS, A1, S2)*	*Networking both internally and externally, UCD (LS, A1, S2)*	*Networking both internally and externally, UCD (LS, A1, S2)*	
C. Research management		*Project Management in the Research Context, UCD (LS, A1, S2)* *Project Management for Researchers, UCD (LS, A1, S2)*	*Project Management in the Research Context, UCD (LS, A1, S2)* *Project Management for Researchers, UCD (LS, A1, S2)*	
D. Public engagement and impact of research	*GS512 Engaging with the community: research, practice and reflection, NUI Galway (LS, A1, S2)* *Giving Tutorials (A3, S2, ES)* *Laboratory Supervision (A3, S2, ES)* *Exam Invigilation (A3, S2, ES)*	*Grant Writing, DCU (LS, A1, S2)* *Pitching your Research to increase Funding Opportunities, DCU (LS, A1, S2)* *Lecturing (A3, S2, ES)*	*Grant Writing, DCU (LS, A1, S2)* *Pitching your Research to increase Funding Opportunities, DCU (LS, A1, S2)* *Lecturing (A3, S2, ES)*	*External Examiner (written exams) (A3, S2, ES)* *External Examiner (theses) (A3, S2, ES)*

[3] http://www.nairtl.ie/index.php?pageID=27&eventID=419

	Correcting Exams (A3, S2, ES)	*Preparing & Correcting Exams (A3, S2, ES)*	

A: The knowledge, intellectual abilities and techniques to do research
B: The personal qualities and approach to be an effective researcher
C: The knowledge of the standards, requirements and professionalism to do research
D: The knowledge and skills to work with others and ensure the wider impact of research
For full details see http://www.vitae.ac.uk/researchers/428241/Researcher-Development-Framework.html

Notes on completing the template
1) As agreed at the meeting, please focus first on R4 and work backwards!

2) Give a brief description of specific courses in the template and accompany with full web references.

3) If possible please provide a measure of how widely available the course is based on:

Availability
A1 – low available at a single institution
A2 – medium available at a number of institutions
A3 – large available nationally (note that this could also be a type of course that is available nationally, e.g. in Ireland courses on research ethics are available for all PhD students in every university however the course itself is delivered locally)

Access
Is the course available to a select group (S1) of researchers or to the whole community (S2). For example, you would indicate S1 if the course is available only for doctoral candidates on a particular PhD programme.

4) Remember that "training" comes in many forms and is not confined to well-defined courses and professional accreditations. At senior level, it may come through collaborations with academics in other countries on supervision, for example. In this context it is important to recognise that there are two broad forms of skills training:

- ***Learned Skills (LS)*** acquired through dedicated Teaching & Learning courses (including classroom, workshop and online)
- ***Experiential Skills (ES)*** acquired through experience (e.g. teaching skills through running tutorials, supervising laboratory sessions and lecturing)

At the PhD level (R1) it would seem that skills acquisition is dominated by Learned Skills while Experiential Skills (ES) dominate for Leading Researchers (R4).

Even if you can only indicate availability and access for a few examples, this would be very helpful. Also if possible distinguish between Learned and Experiential. The emphasis in filling the table is to provide an overview of skills training in your country.

APPENDIX

IRELAND
Version completed 23rd March 2012 and discussed at WG Skills meeting on 27th March

IRELAND
Version completed 23rd March 2012

1. What are the national /regional strategies/initiatives for these levels (R1 to R4)?

There are a number of policy approaches in Ireland, led by the key stakeholders, government, funding agencies and universities. There is no single skills policy for all four categories. One can clearly identify strategies for PhD candidates (R1) as a distinct grouping from the other three. The R2 has some overlap with R1 in terms of skills but R3 and R4 are completely separate.

The section below provides an overview of skills provided for the four categories of researchers.

R1 Doctoral Training

In Ireland, one can identify two approaches to doctoral education, that of the government and of the universities.

Government

There are two national policy documents that set out the approach to the education and training of PhD students. The first is the Strategy for Science Technology and Innovation (SSTI). This was published in 2006 and laid out a national investment strategy for doubling the number of PhD graduates by 2013.

The *SSTI* target of doubling the number of PhDs in higher education involves collaboration between a number of Higher Education groups including the Deans of Graduate Studies, higher education organisations, employers in industry and the government. Agencies which have increased investment in "Fourth Level Ireland" (PhD + early postdoc) include the Higher Education Authority (HEA) through the Programme for Research in Third Level Institutes (PRTLI), the Strategic Innovation Fund (SIF) and Graduate Research Education Programmes (GREPs), the Health Research Board (HRB) and Science Foundation Ireland (SFI). Having developed structured PhD programmes, these agencies have a vested interest in their successful implementation.

Funding for structured PhD's is provide through a number of national programmes. The main one is the Programme for Research in Third Level Institutions (PRTLI). The principal feature of this scheme is its collaborative nature. The various PhD programmes are thematically based and bring together universities, institutes of technology and research centres. Some have industry and / or hospitals as partners.

The economic situation has changed since SSTI was launched in 2006 and the ability for the Irish government to support a full bottom up approach to research investment is no longer feasible. Resources must be carefully targeted to ensure maximum benefit for the Irish economy and society. On 1st March, the Minister for Enterprise Jobs and Innovation unveiled a new plan for public investment in research through the report of the Research Prioritisation Group. The recommendations in this

report build on the strengths developed through previous investments and identify target areas of opportunity. This will be done on a five-year timescale that concentrates on areas that are of clear economic interest to Ireland[4]. The report recognizes the importance of researchers and in particular the PhD. It has two relevant recommendations:

"A consistent quality framework should be developed for postgraduate education and training incorporating the Structured PhD model. Responsibility for monitoring of the output and quality of Masters and PhD training and education should rest with the Department of Education and Skills (DES). Indicators of the quality of postgraduate education and training should be developed by DES and integrated into the Government's overall framework for monitoring science, technology and innovation.

Initiatives to improve further and keep under continuous review the alignment between the supply of trained researchers from academia and the demand for such skills from the enterprise sector are imperative:

- *A proportion of PhD funding should be earmarked to support the development and rollout of the industrial PhD model in Ireland.*
- *A proportion of PhD funding should be redirected towards the development of industry driven Masters programmes.*
- *Technology Transfer Offices within the HEIs should develop a coherent and integrated programme of support for PhD students and early stage post- doctoral researchers that enables them to identify and exploit commercial opportunities arising from their research".*

A new completely separate announcement is imminent that will bring together the two research councils (IRCSET and IRCHSS)[5] to form a single council, the Irish Research Council (IRC). The focus of this council will be the funding of PhD and early stage postdoctoral researchers. It will continue the work of the two previous councils that focused on structured PhD's and researcher career development.

It is clear that the government is committed to the funding of structured PhD's as the best method for the training of doctoral candidates. The new aspect that will be introduced is a major collaboration with the private sector, expanding the current industry PhD.

Universities

Led by the IUA and the universities have restructured PhD education in Ireland. There is now a much more structured approach to graduate studies and research in universities and other higher education institutes. The original proposal was published by the Irish Universities Association (2005) to reform the "Third and Fourth Level" education in Ireland were:

- At Third Level, a radically improved system to support the fundamental changes required to ensure graduates are equipped for a lifetime of innovation and change in the workplace and further learning at Fourth Level (PhD + early postdoc);

[4] There are 14 specific areas including, Connected Health and Independent Living; Medical Devices; Security and Privacy; Digital Platforms; Marine Renewable Energy; Smart Grids and Smart Cities

[5] IRCSET – Irish Research Council for Science Engineering and Technology (www.ircset.ie)
IRCHSS – Irish Research Council for Humanities and Social Sciences (www.irchss.ie)

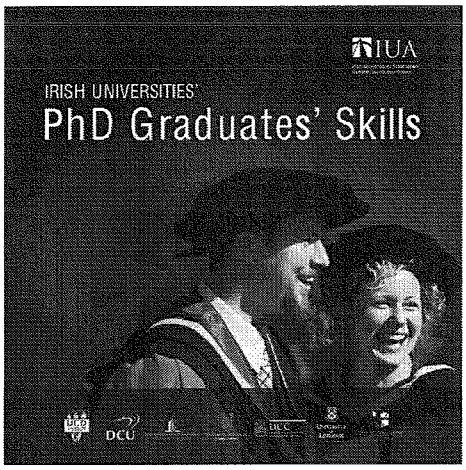
- At Fourth Level (PhD + early postdoc), a dramatic improvement of performance in research and the output of highly-skilled graduates with doctoral qualifications and post-doctoral experience.

Reflecting the need to accommodate support and development opportunities to meet the needs of an employment market wider than academia, furnish places for an expansion in doctoral candidates, and maintain quality, the Irish Universities Association (IUA) asserted in 2005 that:

The current training structures and systems of the universities cannot deliver the required increase in numbers while simultaneously maintaining quality. A substantially modernised system is required to deliver the types of Masters and PhD graduates that are fully skilled to engage in the knowledge society (IUA, 2005: 15).

It was envisaged that the modernised system would include the universal enrolment of PhD candidates on structured programmes. As part of the development Deans of Graduate Studies authored the IUA *PhD Graduates' Skills Statement*, which outlines the competencies, attributes and qualities a PhD graduate should ideally possess following a PhD and acts as a communication document to potential employers. The statement is also considered an aid to those developing and designing structured programmes.[6]

Structured PhD programmes in the universities provide a framework in which students have optimal opportunity to develop these competencies, attributes and qualities. Skills for PhD students such as research skills and awareness, ethics and social understanding, communication skills, personal effectiveness/development, team-working, leadership, career management, entrepreneurship and innovation are included in the *Graduate Skills Statement*. The majority of these competencies are developed through the conduct of research, embodied in the PhD thesis, the quality of which remains the basis for the award of a PhD.[7]



In 2005, the Irish Universities Quality Board (IUQB) published *National Guidelines of Good Practice in the Organisation of PhD Programmes in Irish Universities* to support the development of new structures, policies, guidelines and procedures to assist

[6] In April 2009, the IUA released the contextual statement regarding structured PhD programmes (IUA 2009).
[7] The PhD is placed at level 10 on the National Framework of Qualifications.

doctorate students in Irish Universities and Institutes of Technology. The IUQB, working with the aforementioned Network, revised the guidelines in 2009 reflecting the increasing number of structured doctoral programmes. The 2009 guidelines state that the main characteristics of the structured PhD programme are specified programmes of education and training "*determined institutionally and at levels of facilities and disciplines*", however each student follows a unique programme (IUQB, 2009: 8). These programmes may be provided within one or more institutions.

In 2009, the IUA released a contextual statement regarding structured PhD programmes. The statement defines the core component of a structured PhD programme as:

> *The advancement of knowledge through original research. The goal of such a programme is to provide a high quality research experience and output, with integrated support for professional development. The structured PhD programme is therefore designed to meet the needs of an employment market that is wider than academia, through the introduction of a range of educational and training opportunities as part of the programme. In doing so, the structured PhD can better address the immediate research needs of students, as well as preparing them for future careers in a wide variety of contexts.*

- Enhanced arrangements for supervision and mentorship
- Structured arrangements for the development of generic and transferable skills
- Advanced taught courses in their discipline
- Regular monitoring of progress (IUA, 2009).

Across the seven universities there is now a large number of structured PhD programmes all within a common template. One key feature of collaboration has been the development of ECTS for skills training. This allows students move seamlessly between universities for specific courses and carry their credits.

A typical example of such a programme is **BioAT**, Bioanalysis & Therapeutics. This Structured PhD Programme (BioAT) is a joint initiative being undertaken by Dublin City University, the Royal College of Surgeons in Ireland, National University of Ireland, Maynooth and Institute of Technology, Tallaght to address the challenge of increasing the quality, quantity and entrepreneurial skills of Ireland's graduate researchers in the critical areas of the biopharmaceutical and biomedical device industries.

BioAT offers students a unique training and educational experience in basic and applied research, advanced technologies, and collaborative clinician-scientist research in hospital-based laboratories (Beaumont and Connolly Hospitals, and the Children's Research Centre at Crumlin Hospital). This integrated approach to advancing the understanding, diagnosis and treatment of specific diseases (cancer, neurological, cardiovascular, respiratory and infection/immune diseases) with significant potential for commercialisation is a major strength of the programme. During their PhD students will have the opportunity for placements in international

pharma companies and universities (e.g. Harvard Medical School)

R2 / R3 Recognised and Established Researchers

All researchers beyond the PhD are employees whether on fixed term or permanent contracts. As such they have access to continuous professional development (CPD) organized by the institution's human resources. Many early postdoctoral researchers (R2) would access the skills training offered to PhD students. Some Irish Higher Education Institutes have in place specific CPD schemes for researchers, for example, Dublin City University has the "Researcher Continuous Professional Development" scheme.

The National Academy for Integration of Research Teaching and Learning (NAIRTL, www.nairtl.ie) is a collaboration between University College Cork, Cork Institute of Technology, National University of Ireland Galway, Trinity College Dublin and Waterford Institute of Technology. NAIRTL is a centre of excellence for professional academic development in higher education institutions, targeted at the integration of research and teaching and learning, to support the enhancement of the student experience. It plays a key role in establishing best practice and in developing a cohort of academic staff with the requisite skills to deliver structured PhD's. A typical course delivered by NAIRTL would be on mentoring and supervision of PhD students.

While NAIRTL operates at a national level each university has its own internal structures. For example, in Trinity College Dublin, there is the Centre for Academic Practice and eLearning (CAPSL).

CAPSL offers a number of programmes for professional development and support, including workshops and seminars on various aspects of learning and teaching. Programmes range from short workshops to a new Masters Degree in Education in Learning and Teaching. CAPSL promotes e-Learning by supporting the academic community in developing their knowledge and skills in the use of new technologies. Blackboard/WebCT is the College Virtual Learning Environment which offers lecturers a cohort of tools to design and develop courses on-line.

The Dublin Regional Higher Education Alliance brings together all of the third level institutions in the Dublin area. It pools efforts in the development and delivery of structured training for PhD's.

At the level of **R3**, one will have acquired a significant number of skills, both generic and disciplinary. At this level the typical type of skills offered come through fellowships to enable researchers specialise. A good example is the Health Research Board (HRB) fellowship in translational medicine (see box). The purpose of this fellowship is to enable Clinicians with more than 3 years post-doctoral experience (e.g. doctors, dentists, nurses and other health care professionals) move into the area of translational medicine.

Post-doctoral Research Fellowships in Translational Medicine - Bench to bedside and bedside to bench

Translational medicine is an emerging field which focuses on using what is learned in pre-clinical studies to do smarter things in the clinic ('bench to bedside'). Translational medicine also uses information from clinical studies to sharpen and improve what is done in pre-clinical efforts ('bedside to bench'). It encompasses activities in prevention, diagnosis, prognosis and treatment. Translational medicine bridges applied biomedical research and clinical science with the aim of bringing new discoveries to patients and the population.

R4 Leading Researchers

Almost all of the leading researchers in Ireland are based in the universities and employed as academics (lecturers / professors). As employees they have full access to continuous professional development (cpd) opportunities. At this level the typical type of skills that they might access would relate to senior management (running a university department or becoming a faculty dean).

2. Can you give example(s) of the main intiative (s) on these particular areas (A to D)? **IRELAND**

I have added what I think is useful information to the table.

	R1 First stage researcher	R2 Recognised Researcher	R3 Established Researcher	R4 Leading Researcher
Status	Student / Employee	Employees		
Overview	Completely restructured PhD with transferable/generic skills and advanced disciplinary courses	Many will access the R1 courses but also have access to continuous professional development opportunities through HR	Continuous professional development opportunities through HR	Continuous professional development opportunities through HR
A. Research knowledge and skills	*Graduate Certificate in Innovation and Entrepreneurship, TCD-UCD Innovation Academy* *GS505 Graduate Research Skills, NUI Galway* *'I'm nearly finished' - exploring the personal writing challenges and breakthroughs associated with completing a PhD (NAIRTL)*[8]			
B. Personal effectiveness	*Graduate Certificate in Innovation and Entrepreneurship, TCD-UCD Innovation Academy* *GS510 Publishing Research & Preparing for the Job Market, NUI Galway* *GSS3 Thesis Completion and Career Development, NUI Maynooth*	*Networking both internally and externally, UCD*	*Networking both internally and externally, UCD*	
C. Research management		*Project Management in the Research Context, UCD* *Project Management for Researchers, UCD*	*Project Management in the Research Context, UCD* *Project Management for Researchers, UCD*	
D. Public engagement and impact of research	*GS512 Engaging with the community: research, practice and reflection, NUI Galway*	*Grant Writing, DCU* *Pitching your Research to increase Funding Opportunities, DCU*	*Grant Writing, DCU* *Pitching your Research to increase Funding Opportunities, DCU*	

A: The knowledge, intellectual abitilities and techniques to do research
B: The personal qualities and approach to be an effective researcher
C: The knowledge of the standards, requirements and professionalism to do

[8] http://www.nairtl.ie/index.php?pageID=27&eventID=419

research
D: The knowledge and skills to work with others and ensure the wider impact of research

There is a challenge in completing a table of this type. The first is that, in Ireland, there is no single national initiative for skills training. It is done by single institutions and through collaborative ventures (see examples in previous section). In addition, some of the courses given cover more than one of the four areas.

Let me give a concrete example. The Innovation Academy is a joint venture between University College Dublin (UCD) and Trinity College Dublin (TCD) with the aim of transforming PhD students into entrepreneurs. They offer a *Graduate Certificate in Innovation and Entrepreneurship* available both as an integral part of the doctoral degree and as a stand-alone programme. The two modules within this programme are Creative Thinking & Innovation[9] and Opportunity Generation & Recognition[10].

I have also included specific examples of courses offered as part of the structured PhD in NUI Galway and NUI Maynooth. Of course similar courses exist in all of the universities but it is worth showing some specific examples.

At R2 / R3 level, I give some examples of courses for researcher career development provided by University College Dublin (UCD) and Dublin City University (DCU). It is worth noting that the development courses for researchers at this level are for single universities only.

[9] *http://www.innovationacademy.ie/storage/documents/MODULE%20DESCRIPTOR%201.pdf*
[10] *http://www.innovationacademy.ie/storage/documents/MODULE%20DESCRIPTOR%202.pdf*

APPENDIX

Examples of Structured PhD Programmes and Courses

Bioanalysis & Therapeutics (BioAT)

A Unique PhD Scholars' Programme in BioAnalysis & Therapeutics (BioAT)

This collaborative inter-institutional 4-year structured PhD programme is funded by the HEA under Cycle 5 of the Programme for Research in Third-Level Institutions (PRTLI). The programme brings together the complementary expertise of researchers from Dublin City University, the Royal College of Surgeons in Ireland, National University of Ireland, Maynooth and Institute of Technology, Tallaght.

BioAT is an integrated, flexible and student-centric programme which will enable students to broaden their skills base and career opportunities through participation in high quality research, advanced training, personal and professional development, and exposure to an innovative, translational research environment.

Research projects underpinning Bio-AT training will lead to developments in **bioanalytical methodology and technology** applied to disease diagnosis and treatment. Furthermore, they will have significant potential for commercialisation.

Research opportunities related to the following areas are available:

- Cardiovascular disease
- Infection & Inflammatory disease
- Neurological disease
- Cancer
- Regenerative medicine
- Metabolic disease
- Diagnostics
- Bio-Photonics & Imaging
- Medicinal Chemistry
- Nano-Bioanalytics
- Biosensors
- Biomedical devices

BioAT will award 29 scholarships in 2011 based across the partner institutes. We are currently accepting applications from students with genuine interest and commitment to performing innovative translational research. Full details of how to apply can be found below.

Objectives of BioAT

The overall objective of BioAT is to train and develop the participating students to become world-class researchers with the leadership and innovation skills required to underpin the continued growth and sustainability of these industries in Ireland. The specific objectives are:

- To **establish an innovative inter-institutional model of structured PhD training**

- To **provide a personalised PhD programme**, designed to optimally enhance graduate training with specific emphasis on transferable and research-focused competencies of direct relevance to the career destination of Bio-AT graduates, including academia, industry and the clinical environment.

- To deliver **collaborative multi-disciplinary PhD projects** across the consortium in Target Identification, BioAnalysis, Therapeutics, Diagnostics, Drug design which have specific translational applications in areas such as cancer, neurological, cardiovascular, respiratory & infection/immune diseases.

- To **deliver cross-institutional PhD projects** across the partners that will be **uniquely enhanced through engagement with industry & clinicians**, made possible by the partnership.

Features of the BioAT Programme

- Access to relevant taught modules across all partner institutions
- 3 laboratory rotations across the partner institutions
- Choice of inter-institutional PhD projects from an extensive range
- Training in cutting-edge technologies
- Supervision by internationally renowned researchers
- Personalised professional development programme
- Travel to international laboratories and conferences
- Emphasis on translational research with clinicians and industry
- Annual stipend €16,000 plus fees (at EU level), travel allowance and laptop

National Academy for Integration of Research Teaching and Learning (NAIRTL)

The National Academy works with Irish higher education institutions to develop and implement policy and practices aimed at enhancing the student learning experience at both undergraduate and graduate level. The Academy supports institutions through investigation and dissemination of national and international examples and models of good practice.

The National Academy's mission is:

- To enhance higher education in Ireland by working in collaboration with institutions to promote innovation, support development and sustain good practice in the integration of research and teaching and learning.
- To build capacity of academic staff and graduate students that will contribute to an innovative work force.
- To provide an efficient, cost effective and quality service to the Irish Higher Education sector.
- To promote a greater awareness of the forms of integration of research, teaching and learning and to encourage all:

Research-led teaching and learning: The curriculum is informed by the research interests of academic staff. Teaching emphasises the understanding of research findings. Research findings are used to inform the curriculum.

Research-oriented teaching and learning: The curriculum emphasises the processes by which knowledge is produced in the field as much as on learning the content of a subject. Teaching focuses on enquiry skills and on acquiring a 'research ethos'.

Research-based teaching and learning: The curriculum contains many activities in which students actually conduct research e.g. enquiry based projects. These activities are based on authentic processes of enquiry and are connected to the research of the institute.

Research-informed teaching and learning: The curriculum is informed by a systematic enquiry into the teaching and learning process itself. The 'scholarship of teaching' approach relates to teachers who are actively involved in evidence-based efforts to establish the effects and effectiveness of student learning, teaching and academic practice.

Dublin Region Higher Education Alliance (DRHEA)

The Dublin Region Higher Education Alliance (DRHEA) is a strategic alliance of the Higher Education sector in the wider Dublin city-region. It includes four Universities and their linked Colleges (TCD , UCD , DCU and NUIM) and four Institutes of Technology (DIT , IADT , ITB and ITT Dublin). The DRHEA has identified four strands where institutions can work collaboratively to increase efficiencies and enhance academic development-:

- Enhancement of Learning
- Graduate Education
- Internationalisation
- Widening Participation

Access to DRHEA academic development are availble to Trinity academic community, For more information on stands and activies click on http://www.drhea.ie

DRHEA projects within Trinity College: The Trinity Inclusive Curriculum Project

Dublin Centre for Academic Development (DCAD)

The Dublin Centre for Academic Development (DCAD), the focal point for the DRHEA's Enhancement of Learning strand, will create a 'virtual' Centre that will capitalise on expertise in educational practice, pedagogy and training in the individual institutions, and will provide access to tailored, structured programmes of training, development and support for academics in a cost-effective and collaborative manner.

The DCAD will prioritise the development of a professional development framework, underpinned by an agreed set of core values that will act as benchmarks for excellence for learning, teaching and assessment across the Dublin region and more generally across Irish higher education.

Key Objectives

- Establish a fellowship programme to develop academic leadership and drive academic change across the DRHEA and to improve practice through collaborative activity around priority areas
- Develop a shared accredited training programme for academic staff and tutors which will rationalise teacher training across the DRHEA and build on existing training and educational strengths in partner institutions
- Set up a database of shared expertise and identify multidisciplinary networks to share ideas and collaborate on priority issues

Graduate Studies Modules – NUI Galway *GS505*

Graduate Studies Form for Modules attached to Structured PhD and/or Research Masters Programmes	
Title	Graduate Research Skills **School of Natural Sciences- additional requirements in blue (SNS)** **recommends years 1-3 for completion**
Credits (ECTS)	5
Module Places	Available to all new entrant / year 1-3 PhD candidates affiliated to the Colleges of: • Science • Engineering & Informatics • Medicine, Nursing & Health Sciences
Course Instance	
Module Code:	GS505
Responsible:	***School of Physics – Chair, RGE Committee, Physics**
Please indicate if generic (GS) or specialised module	Incorporating a blend of generic (GS) and discipline specific units as appropriate.

Indicative Module Descriptor:
This module aims to enable students to develop and acquire a range of generic and discipline specific research skills and gain an understanding of their practical application to the research process, in order to successfully complete fourth level research.

The module will be delivered over four semesters of the PhD programme and delivery will incorporate a blended learning approach including participant attendance at face-to-face units incorporating both generic and discipline specific themes and utilisation of supporting online courseware available via Blackboard.

By the end of this module, the student is expected to be able to:

- Demonstrate the ability to identify, access and critically evaluate the requisite specialised skills, technical training, and specialised diagnostic or other equipment required to carry out their research project
- Demonstrate the ability to write regular comprehensive reports of their research/ laboratory activities
- Demonstrate an ability to prepare and document annual plans that indicate their detailed strategy for the succeeding phases of the research
- Demonstrate an ability to exploit the extensive patent databases and to benchmark their research activity against the relevant patent literature **as appropriate**
- Demonstrate an ability to communicate their data or findings in poster format and to a peer audience in the discipline
- Demonstrate an understanding of the importance of a notarised notebook as a record of their original contributions to research
- **The Supervisor and Graduate Research Committee are primarily responsible for overseeing this module**

Workload:	
Class Contact	Contact hours: • Total 6-9 hours of which a minimum of 3 hours will be in the form of a face-to-face ½ day workshop and the remaining hours selected from either face-to-face or online self-paced learning

	units.
Workshop (other forms of educational activity)	• Required attendance at relevant discipline-specific *Getting Started on Your PhD* ½ day workshop • Plus attendance at a range of optional face-to-face workshops or self-directed learning via appropriate online modules, including generic and discipline specific themes. • **Graduate Studies expects that the School of Natural Sciences will provide the class and workshops**
Specified Assignment(s)	Aligned to the student's PhD research question, module participants will be required to: 1. Submit 2 referenced annual reports of their research progress (including projected future research activity plans) (Assessor: Graduate Research Committee) 2. Prepare a presentation on their work for presentation to a peer-audience in their discipline. (Assessor: Graduate Research Committee) 3. **Optional for SNS:** Maintain a reflective blog/journal (via Blackboard) outlining and tracking the processes and methods used to progress their research (Assessor: PhD Supervisor)
Autonomous Student Learning *(please specify)*	Following attendance at relevant workshops and / or use of online courseware, students will be expected to undertake independent research activities and apply their knowledge and skills in order to: • Produce comprehensive annual reports of their research, appropriately referenced and calibrated against recent work in their field. • Identify their needs for training in new techniques, and for access to facilities, information, and software, in order to complete their research. • Keep up-to-date with advances in their field • Develop an informed and appropriate strategy for upgrading their technical skills • Maintain a notarised notebook of their research activity.

Assessment(s)

	Type	% of marks	Timing
• Annual reports outlining research progress and a critical assessment of training and other needs • Annual presentation to peer audience, describing their research progress and their plan for the completion of their project • Reflective blog entries **optional for SNS** • A well-structured research notebook, regularly updated and signed	**100%**		
Result	Pass / Fail		

Graduate Studies Form for Modules attached to Structured PhD and/or Research Masters Programmes	
Title	Professional Development: Publishing Research and Preparing for the Job Market
Credits (ECTS)	5 ECTs
Module Places	
Module Code: Please indicate if generic (GS) or specialised	GS510
Elective Places	

Indicative Module Descriptor:
The purpose of this module is to prepare PhD students to be successful in publishing in international journals and, ultimately, to obtain a job on graduation. The goal is for the students to have a clear understanding of how to turn their PhD thesis into journal publications by identifying suitable journals, and understanding what reviewers and editors are looking for in manuscripts. They will also gain insights into what they should be doing, over and above their PhD thesis, to allow them to be competitive in the job market. The students will hear from internationally experienced post doctoral students, researchers, lecturers, and professors from across the social science disciplines. These contributors will provide a practical approach to allow the students to learn from their successes (and failures).

Indicative Learning Outcomes:
On successful completion of this module, students will:

- understand how to prepare a research publication strategy based on their doctoral dissertation;
- understand how to prepare a manuscript for journal publication;
- understand what journal reviewers are looking for in a manuscript;
- understand how to decide which journal(s) they should target for publication;
- understand how they should deal with reviewer comments
- understand the job market, and expectations of academic employers both nationally and internationally; and
- have developed a CV and short biography.

Workload:

Class Contact	24 hours, separated into four half-day sessions.
Seminar-based delivery	The information will be delivered in the style of a seminar and interactive manner with students actively participating. Students will also be required to make presentations.
Specified Assignment(s)	Individual assignment: • Develop a research publication strategy based on their doctoral dissertation • Identify two journals to target for publication. Provide evidence of why these journals are suitable, and develop an outline (1,000 words) of a potential manuscript to submit to the journal. • A detailed review of an academic manuscript as would be carried out by a journal reviewer (1,500 words) • The development of an academic CV. • A short biography (<500 words) on the student similar to what is included in a grant application.
Autonomous Student Learning *(please specify)*	*Example :Pre-Practical Reading* • Join in class discussions and make class presentations

Assessment(s)			
	Type	% of marks	Timing
Individual Assignment (as described above – Specified Assignment)	**100%**		
Result	Pass / Fail		

Graduate Studies Form for Modules attached to Structured PhD and/or Research Masters Programmes	
Title	**Engaging with the community: research, practice and reflection**
Credits (ECTS)	10
Module Places	15
Module Code:	GS512
Elective Places	

Indicative Module Descriptor:
This module is designed as an experiential learning opportunity for Structured PhD research students. In the course of this module they will apply their discipline-specific knowledge/skills to the design, conduct and reporting of a community-engaged, applied research project. Working with the module team, each student will devise an individualised learning experience. The module is intended to accommodate a range of interests, from those students whose doctoral research is in social research through to students carrying out theoretical or laboratory-based projects.

Research topics/themes/problems for a research project may be identified by a community partner, by the individual student/s, by a multidisciplinary team, by relevant academic or research staff/units/groups within the university, or in collaboration with Community Knowledge Initiative (CKI).

Research students will have a shared learning experience through a series of preparatory and reflective seminars, organised on a multidisciplinary basis. Through seminar work, students will report on progress, share their learning, discuss opportunities and challenges, and identify their own learning needs. This reflective space will help link together participants working on potentially different projects in varied settings.

The module – and the accompanying seminars – will be facilitated by academics, researchers and community partner representatives (e.g., COPE Galway), working together to support students in learning about and carrying out community-engaged research. This professional input will combine expertise and experience in applied, collaborative and participatory research methods.

This module has been developed by a multidisciplinary team within NUI Galway as one of the intended outcomes of the Community Engaged Research in Action (CORA) project. The availability of this module to doctoral student and community partners, as a credit-bearing element of a Structured PhD programme, will contribute to the realisation of the civic engagement envisioned by the university as part of the student experience.

The module may be taken by Structured PhD or Research Masters level students, with the agreement of the relevant supervisor and/or programme director.

Aims of the module
The module aims to give students the opportunity to:

- Enhance their personal effectiveness, capacity for innovation and professional competence thus increasing their employability
- Develop research skills in an applied, real-world setting, in response to an identified research need
- Apply discipline-specific knowledge and skills to a research project
- Work collaboratively with a community partner and/or as part of a research team
- Work with people from other disciplines in solving research problems
- Develop a deeper insight into the impact of socio-economic conditions and public policy on real world issues
- Scrutinise and reflect on social norms and their own role as agents of change in society

Indicative Learning Outcomes:

On successful completion of this module, students should be able to;

- Critically evaluate the concept, nature, purpose of community engagement and be cognisant of

different modes of engagement
- Understand how collaborative and participatory methods can inform research practice, through the process of data collection, interpretation and representation
- Engage appropriately with partners in a community-engaged research project
- Conduct a research needs analysis with a community partner/s or contribute to a project already identified
- Plan, conduct, present and evaluate a research project in a collaborative manner
- Reflect critically on their own research practice, doctoral research and future professional practice
- Apply their disciplinary knowledge and skills to real world research inquiry
- Critically consider ethical issues that arise in real world research

Workload: *Total of 200 hours for 10 ECTs module*

Class Contact: Seminar attendance (A reflective space)	20 hours
Workshop: Participation in specific workshop/s, as per individual learning needs/skills gap	0-20 (as necessary)
Specified Assignment(s) Portfolio Presentation Evaluation	50
Autonomous Student Learning: Negotiating with community partner Group meetings with members of a team Planning the research design Conduct of project using collaborative and/or participatory methods Preparation for presentation of outcomes Self appraisal and preparation for evaluation	*110-130*

Assessment(s)

To be jointly assessed (as appropriate and as agreed) by the module facilitator/s, research team members, thesis supervisor and community partner.

1. *Portfolio*
Including, for example,
- Log of research activities (individual and/or group)
- Reflective journal
- Evidence of research practice

2. *Presentation*
(Oral, written, poster, or other medium as appropriate)
Individual or group presentation of research outcomes - process and/or product as appropriate.

3. *Evaluation*
Participation in evaluation by partners to research process
Including self/peer/group/community partner/external evaluation, as appropriate.

	Type	% of marks	Timing
Year 1: Participation in reflective seminars Assessment: portfolio, presentation Participation in evaluation process	Mandatory	100%	
Result	Pass 65% / Fail		

Module

PROFESSIONAL SKILLS - THESIS COMPLETION AND CAREER DEVELOPMENT

Module code: GSS3
Credits: 5
Semester: 2
Department: NIRSA
International:

Overview

Monday 23 – Wednesday 25 January 2012.
Location: AFF Seminar Room, Iontas Building.

Note: This module meets the requirements for GSS3 and GSA3; it will take place once during this academic year (in January 2012) and will not be repeated in semester 2. Minimum enrolment 10 students.

Module objectives:
The module will prepare students for the completion and defence of their thesis and life after their PhD, including career strategy, disseminating their work, applying for scholarships and jobs.

Module content:
Dissertation completion: Review of NUIM requirements—Using EndNote to manage bibliographies and references—Abstracts, Acknowledgements, Table of Contents—Using good Referencing Systems—Tables and Diagrams—Technical production of thesis—Making corrections

Viva preparation: Aims and purpose of the Viva—Modes of advance preparation—Responding effectively to questions about research—Dealing with critics and reviewers—Including mock vivas

Dissemination of dissertation: Locating projects in a wider field of scholarship and learning—Developing a sense of the scholarly and social value of your research project—Post-doctoral publications: submitting manuscripts or proposals to publishers and preparing articles for scholarly or other journals.

Career strategy: Post-PhD—Career paths—Research and teaching careers—Applying for postdoctoral scholarships—Research grant writing and applications—CV Writing and cover letter writing. Job Interviews

Learning Outcomes

On successful completion of the module, students should be able to:

- Be prepared for the completion and defence of their thesis and life after their PhD, including career strategy, disseminating their work, applying for scholarships and jobs

Teaching & Learning methods

- 18 hours (blocked into 3 full days) of workshops and practicals

Delivery methods	Hours
Lectures	24

UCD Research Skills & Career Development

Forbairt Ghairme & Taighde Scileanna UCD

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Networking both internally and externally

Researchers can develop their networking skills by contacting other colleagues, both within and outside of the university, and PI/Mentors may have some useful contacts that they would be willing to pass on. Talking to other researchers in the university about their role and the type of work in which they are involved is a useful way of understanding work in different contexts, and can help researchers make better informed decisions about potential moves to other environments. The opportunity to discuss experiences and exchange knowledge, insights and perspectives is a useful exercise and helps people to see challenges differently and even come up with creative solutions to move a situation forward.

Benefits of networking

Networking internally- raise your profile, source new project opportunities, strengthen relationships with stakeholders and gather information on requirements
Networking externally with peers - exchange of best practice knowledge, learn new methods, stay abreast of latest news or find knowledge or contacts to help a colleague.

How do they operate?

Networks are operated on an informal basis and are self managed so the ground-rules, procedures and areas for discussion are agreed by the network participants. The network can operate by email or face to face and as well as a forum for discussion and problem solving. It allows people a sounding board to test out new ideas in front of a cross disciplinary audience. It is recommended that in order to build and nurture interpersonal connections that the network meets face to face at least once every three months. However the idea is not to become too prescriptive so that the network is something that participants choose to maintain rather than it becoming an onerous obligation.

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UCD Research Skills & Career Development

Forbairt Ghairme & Taighde Scileanna UCD

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Project Management in the Research Context

Objectives:

To

Understand the difference between a 'project' and 'on-going activities'
Understand relationships between project components (resources, duration and scope)
Develop a project plan
Understand the concept of a 'critical path' and how changes in schedules and resource allocation affect the overall duration of the project
Identify the key stakeholders for your project and understand their influence and potential impact on a project
Identify and manage risk in your project including the risks related to the uncertainty of research outcomes
Have an awareness of the key project management tools you can use to manage your project.

Content

Project Concept
Defining the project
Project Planning
Project Implementation
Closing the Project
Project Management Tools
Comparing commercial and academic research
Practical Scenarios

Duration:

Self Managed

Delivery Method:

Online Resource

How to Access?

Please email researchcareers@ucd.ie for access to this resource.

UCD, Belfield, Dublin 4, Ireland. Tel : 353-1-7167777

Print this page

UCD Research Skills & Career Development

Forbairt Ghairme & Taighde Scileanna UCD

Project Management for Researchers

Objectives:

To:

To discuss the relevance of project management in the business environment
Apply fundamental Project Management tools to real world projects
Carry out project progress and performance measurement and evaluation
Evaluate projects within your organisation
Demonstrate an understanding of the elements of a Project Management Methodology.

Content

Introduction to Project Management - Setting the scene
Methodology
Estimating & Costing
Planning and monitoring a project
Risk Management
Leadership & Stakeholder Management
Managing Project Teams

Duration:

2 days

Delivery Method:

Training Programme

How to Book?

Should you be interested in attending this programme please email researchcareers@ucd.ie. Please refer to the Events Calendar for scheduled dates.

Please note that as this programme runs during the day it is important that you agree your attendance on this programme with your PI/mentor/supervisor prior to attending.

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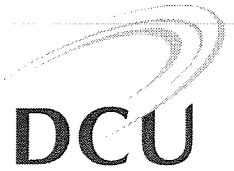


PITCHING YOUR RESEARCH TO INCREASE FUNDING POSSIBILITIES
Module duration: This course consists of 2 half days and 1 full day

Aims of this course:

- to develop a common language to speak to potential investors or business partners
- to convey the excitement and value of their research
- to understand and fulfil the expectations of industry and external stakeholders
- to create/improve a powerful power point presentation of their research for industry

At the end of this course, participants will be able to:

- identify and articulate what makes DCU different
- develop a structure and create openings and closings for presentations
- develop the body of the presentation including facts/benefits and evidence to support the proposal
- create a power point presentation for DCU yet allowing each participant to deliver their presentation in their own style

Target Audience:
This workshop will benefit both academic staff and experienced researchers who are currently involved in or will be involved in making oral presentations on their research to potential investors.

DCU

GRANT WRITING

Module duration: 1 day

Target Audience:
Researchers of any discipline who wish to apply as principal applicants for individual and/or project funding.

Aims of this course:
To cover aspects of grant writing that are directly relevant to grant proposals. The areas covered will include:

- assessment of the funding opportunities
- institutional procedures and budget preparation
- common mistakes
- proposal content
- reviewers
- collaborators
- strategic background to a proposal
- CV preparation
- what to do when rejected

At the end of this workshop, participants will have learned:

- important principles of writing successful grant applications in line with DCU and funding body procedures in order to succeed in competitive funding calls.

APPENDIX 3a(i)
Austria

Bundesministerium für Wirtschaft, Familie und Jugend

Bundesministerium für Wissenschaft und Forschung

The Austrian Federal Government presented in March 2011 a strategy for research, technology and innovation involving several Ministries, the social partners and crucial stakeholders http://www.bmwf.gv.at/fileadmin/user_upload/Broschuere_FTI_Englisch_WEB.pdf
The strategic plan heads for "Realising potentials, increasing dynamics, creating the future: Becoming an innovation leader". This clear statement in favour of promoting research, technology and innovation defines therefore the strategic operative goals, the action priorities and the support measures that are relevant to the implementation over the next decade. The need for adequate human resources in research, technology and innovation has been identified along with the mobility of researchers and their career development as a key challenge.

Top performances in research are definitely the basis for successful cooperation between science, business and society. This has evidently consequences on higher education and research institutions. An excellent situation for universities, universities of applied sciences, and non-university research institutes are seen as the basis of the innovation system. They have to work within excellent framework conditions and be sufficiently financed to optionally perform their tasks in research and instruction. Attractive science careers at the international level shall be the prevalent standard at Austria´s universities. The development of human resources is therefore targeted by higher education programmes but seldom formal or specific criteria directly related to transferable skills are mentioned in the curricula. Still several programmes especially focusing on transferable skills have been set up by different stakeholders.

Structured doctoral programmes ("Doktoratskollegs")
The Austrian Science Fund (FWF) offers a programme for the funding of structured doctoral programmes ("Doktoratskollegs") at research institutions that are entitled to award a doctoral degree. These are training centers for highly qualified doctoral candidates from the national and international scientific community. A "Doktoratskolleg" is formed as a result of a joint initiative by several scientists or scholars whose research is of internationally leading standard, and is based on a clearly defined research programme. The doctoral programmes have close cooperation with an existing large-scale research programme. Interim reviews every four years decide on continuation of funding of the doctoral programme, with a maximum length of 12 years. Doctoral candidates are employed on work contracts with full social coverage, the positions are advertised internationally. The programmes provide for a stay abroad and offer transferable skills training.

Transferable skill category: Research competences – Grant application writing skills:
Funding organizations like the Austrian Science Fund (FWF) and the Austrian Research

Promotion Agency (FFG) provide/offer seminars on proposal writing to enhance the writing skills of PhDs and postdocs.

The **"fForte Coaching" programme offered by the BMWF** is a 2-semester course aimed at helping women put together successful grant proposals. It also provides information on various sources of funding as well as personality development, among other things, in order to increase the proportion of women in a range of research funding programmes.

The **Austrian Agency for International Cooperation in Education and Research** (OeAD-GmbH) provides guidelines recommendations and seminars for the elaboration of grant proposals.

The programme **LISA (Life Science Austria)** promotes since 1999 the creation of start-ups in the area of life sciences and the commercial application of research results. Specific qualification activities within this programme are aimed at researchers and students as potential entrepreneurs in the life science sector.
Examples of special activities:

- Business seminars on specific key issues (team building, leadership, legal issues,...)
- Training modules on business in life science courses as part of the University of Vienna and the University of Applied Sciences of Vienna

An **international Business Plan Competition BOB "Best of Biotech"** is designed to attract in particular the participants from universities and other research institutions to encourage entrepreneurial potential in life science research and to exploit research results in a commercial way.

On a small scale the publicly funded organization **"dialog<>gentechnik"** every year holds a competition for scientists/students to write press releases as part of their remit in science communication.

The 2011 started **programme "Building Research Capacity in Industry** has been designed to provide targeted structural funding measures to support companies in the systematic development and qualification of their research and innovation staff. The programme thereby also aims at promoting cooperation between companies and tertiary education and research institutions and to enhance the integration of industrially relevant research fields. Universities, universities of applied sciences and other educational institutions and intermediaries can be seen as an indirect target groups (by conducting these training programmes). A goal of the programme is a stronger anchoring of business-relevant teaching and research at universities and universities of applied sciences as well as the increase in sectoral mobility.
The programme includes qualification seminars (training of employees of Austrian companies; focus on SME; 5-15 working days); qualification networks (medium- to long-term build-up of R&D expertise in Austrian companies together with universities, universities of applied sciences and other educational and research institutions located in Austria; six months to two years); and tertiary level courses (courses of universities or universities of applied sciences together with companies in industry driven topics; four years).

The promotion of collaboration between science and business has given rise to a broad spectrum of successful institutions alongside universities and firms in Austria. Especially in the context of the **workplace experience for transferable skills acquisition** some

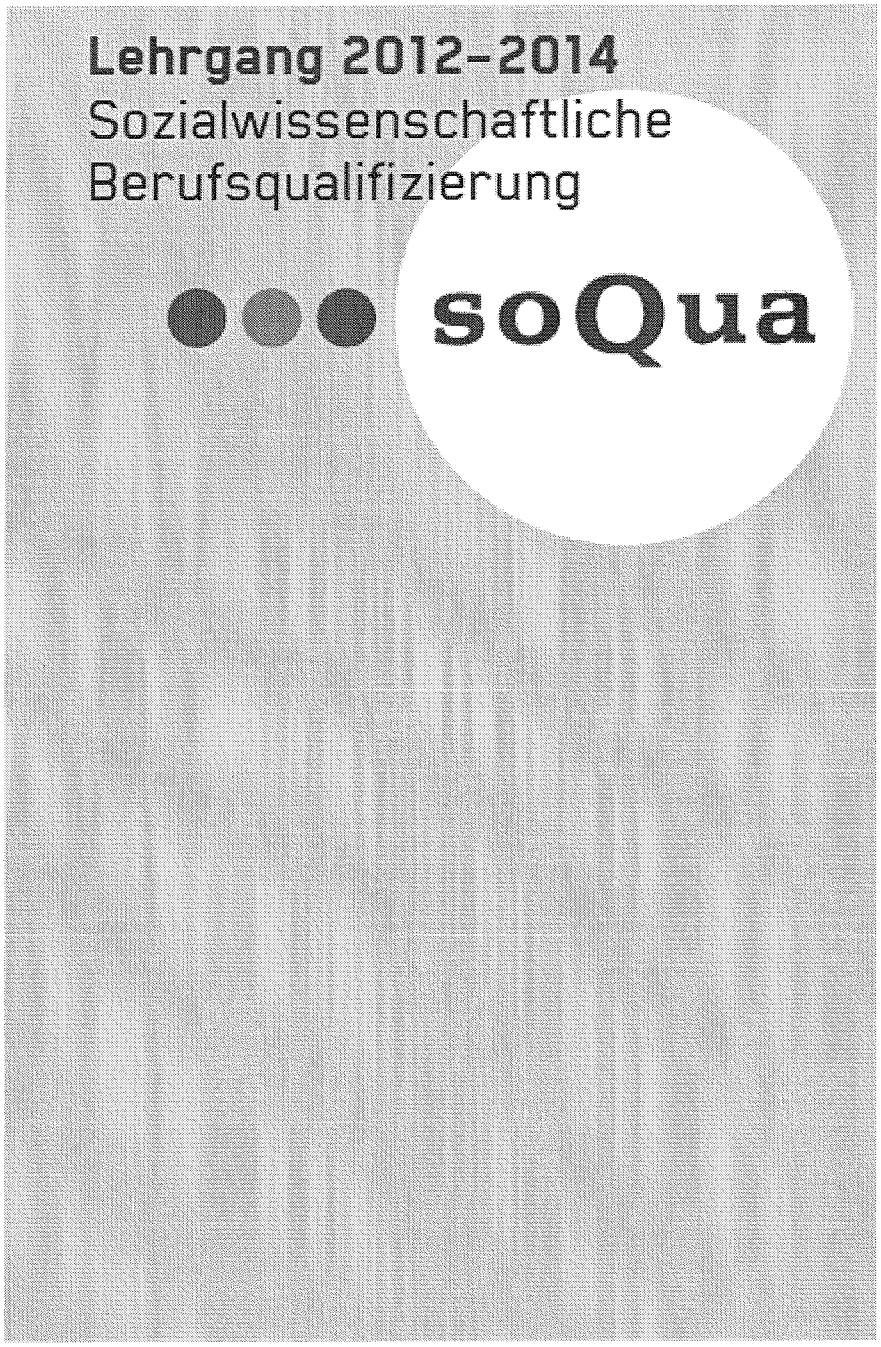
temporary implemented institutions (based on specific programmes) have to be mentioned, since they are playing an important role in technology transfer between science and industry. These programmes make an important contribution to the development of transferable skills especially in workplace experience. Depending on particular objectives and basic parameters of the underlying programme these collaborations between research (universities, and other research institutions) and industry can be aligned up to a 10 year period. In doing so a broad spectrum of researchers (diploma and doctoral candidates, post-docs,...) may acquire a wide range of transferable skills and relevant experience with participating industry partners.
Examples of these temporary implemented Institutions in Austria are:

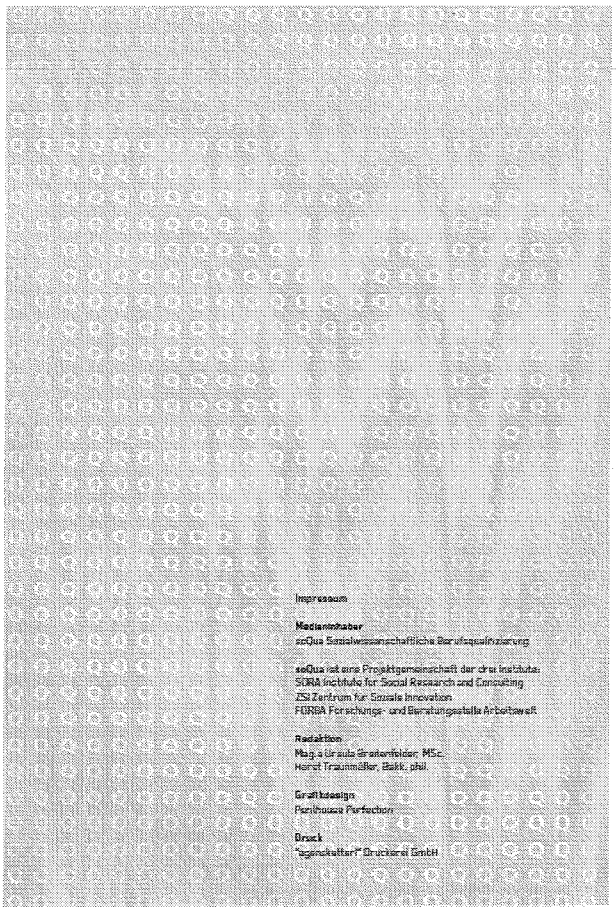
- Competence Centers for Excellent Technologies – COMET
- Christian Doppler Laboratories
- Josef Ressel Centres
- Laura Bassi Centres of Expertise
- Research Studios Austria – RSA

APPENDIX 3a(ii)
Austria

Austria	R1 First stage researcher	R2 Recognised Researcher	R3 Established Researcher	R4 Leading Researcher
Status	Student / Grant holder/ Employee	Grant holder / Employee		
Overview	Structured doctoral training with transferable/generic skills and advanced disciplinary courses	Access to R1 courses but also access to continuous professional development opportunities through HR	Continuous professional development opportunities through HR	Continuous professional development opportunities through HR
A. Research knowledge and skills	Subject specific courses available organized by the HEI; Two year course for socio scientific vocational qualification www.soqua.net (A1, S1, LS, ES) See annex; Structured doctoral programmes of the Austrian Science Fund (A3, S1, LS, ES) http://www.fwf.ac.at/en/projects/doctoral_programs.html	Two year course for socio scientific vocational qualification www.soqua.net (A1, S1, LS, ES) See annex;		
B. Personal effectiveness	Two year course for socio scientific vocational qualification www.soqua.net (A1, S1, LS, ES) See annex; Writing skills; grant application skills seminars by the Austrian Science Fund (FWF) and the Austrian Research Promotion Agency (FFG) (A2, S2, LS) www.fwf.ac.at/de/public_relations/fwf-informationsveranstaltungen/cws-index.html Seminars for the elaboration of grant applications (A2, S2, LS) www.oead.at	Two year course for socio scientific vocational qualification www.soqua.net (A1, S1, LS, ES) See annex;		
C. Research management	Two year course for socio scientific vocational qualification www.soqua.net (A1, S1, LS, ES) See annex;	Two year course for socio scientific vocational qualification www.soqua.net (A1, S1, LS, ES) See annex;		
D. Public engagement and impact of research	Two year course for socio scientific vocational qualification www.soqua.net (A1, S1, LS, ES) See annex;	Two year course for socio scientific vocational qualification www.soqua.net (A1, S1, LS, ES) See annex;	Collaboration between science and business eg. Laura Bassi Centres of expertise (A2, S1, LS, ES) http://www.w-fforte.at/at/laura-bassi-centres eg. Christian Doppler laboratories (A3, S1, ES) http://www.cdg.ac.at/	Collaboration between science and business eg. Laura Bassi Centres of expertise (A2, S1, LS, ES) http://www.w-fforte.at/at/laura-bassi-centres eg. Christian Doppler laboratories (A3, S1, ES) http://www.cdg.ac.at/

APPENDIX 3a (iii)
Austria





Impressum

Medieninhaber
soQua Sozialwissenschaftliche Berufsqualifizierung

soQua ist eine Projektgemeinschaft der drei Institute:
SORA Institute for Social Research and Consulting
ZSI Zentrum für Soziale Innovation
FORBA Forschungs- und Beratungsstelle Arbeitswelt

Redaktion
Mag.a Ursula Gratenfelder, MSc.
Horst Trauninger, Bakk. phil.

Grafikdesign
Pechhacker Perfection

Druck
"agentkultur" Druckerei GmbH

soQua

Postgradualer Lehrgang
2012–2014
für die internationale
sozialwissenschaftliche
Forschung

Konzipiert und durchgeführt von:

SORA

FORBA

ZSI

Veranstalter

SORA
Institute for Social Research and Consulting
SORA gehört zu den führenden privaten sozialwissenschaftlichen Instituten in Österreich und verbindet Exzellenz in quantitativen wie qualitativen Methoden mit hoher Anwendungsorientierung.
SORA forscht für öffentliche Einrichtungen ebenso wie für Interessenvertretungen und namhafte Privatunternehmen. Inhaltlich reichen die Themen von Wahlverhalten und Politischer Kultur über Bildung und Arbeitsmarkt bis hin zu Wohnen und Lebensqualität.
→ www.sora.at

FORBA
Forschungs- und Beratungsstelle Arbeitswelt
FORBA ist ein interdisziplinär zusammengesetztes, international ausgerichtetes Forschungsinstitut. Die wissenschaftliche Arbeit ist spezialisiert auf den Themenkreis Betrieb, Arbeit, Technik und Gender. Eingebunden in die Disziplinen Soziologie, Politikwissenschaft und Informatik betreibt FORBA Grundlagenforschung und angewandte Forschung auf diesen Gebieten.
→ www.forba.at

ZSI
Zentrum für Soziale Innovation
Das ZSI bündelt als sozialwissenschaftliches Institut Beratung, Bildung, Netzwerkkoordination und Forschung. Thematische Schwerpunkte sind "Arbeit und Chancengleichheit", "Forschungspolitik und Entwicklung" sowie "Technik und Wissen". Das Zentrum gehört zu den erfolgreichsten Institutionen in der EU-Forschung und arbeitet auch im Auftrag von OECD, UN-Organisationen (UNESCO, UNIDO, ILO) oder der Weltbank.
→ www.zsi.at

Finanziert durch das

BMWF

Praxisnahe und berufsbegleitende Weiterbildung auf höchstem Niveau

soQua ist eine gemeinsame Initiative der führenden außeruniversitären Institute SORA, FORBA und ZSI. Seit dem Jahr 2006 bietet soQua praxisnahe und berufsbegleitende Weiterbildung auf höchstem Niveau und hat sich als eine zentrale Schnittstelle zwischen den Universitäten und der Berufspraxis etabliert.

Der postgraduale Lehrgang 2012–2014 für die internationale sozialwissenschaftliche Forschung wird vom Bundesministerium für Wissenschaft und Forschung im Rahmen des Programms Graduiertenförderung Geistes-, Sozial- und Kulturwissenschaften finanziert. Die Teilnahme ist kostenlos.

Der Lehrgang 2012–2014 beginnt im Oktober 2012 und dauert bis Juni 2014. Er umfasst in fünf Modulen 32 Seminartage. Bewerbungen können bis 30. Juni 2012 über www.soqua.net eingereicht werden.

soQua bietet

- **Schlüsselkompetenzen und Know-how für die Berufspraxis in Antrags- wie Auftragsforschung:** empirische Methoden, Projektmanagement, europäische Forschung, Ergebnisverwertung und Anwendungsorientierung
- **Erfahrenen PraktikerInnen über die Schultern schauen:** erprobtes Know-how für Projektdesign und -management; quantitative und qualitative Methoden unter realen Bedingungen knapper Ressourcen; Akquisition und Verwertung in der Auftragsforschung
- **Neue Netzwerke und berufliche Perspektiven:** soQua bietet Lernen und Austausch in kleinen Gruppen und vernetzt TeilnehmerInnen und Referentinnen aus zahlreichen österreichischen Forschungsinstitutionen
- **Vertiefung universitärer Ausbildung und Lernen von- und miteinander:** soQua erweitert die disziplinäre akademische Ausbildung um inter- und transdisziplinäre Fragestellungen und eröffnet neue Möglichkeiten der Zusammenarbeit
- **Schwerpunkt Methoden und Arbeitstechniken:** Fragebögen, Statistik, qualitative Auswertung, Analyse internationaler Datensätze, Evaluationsforschung und mehr – soQua vermittelt Werkzeuge und praktisch verwertbares Wissen

TeilnehmerInnen

soQua richtet sich an:
- Junge WissenschafterInnen in der Phase des Berufseinstiegs.
- Graduierte UniversitätsmitarbeiterInnen, die in Forschungsprojekten arbeiten.
- Graduierte MitarbeiterInnen von Forschungsinstituten, die praxisorientierte Weiterbildung und neue Entwicklungsmöglichkeiten suchen.

Teilnahmekriterien

Akademische Graduierung
Das Programm richtet sich an Graduierte bis 6 Jahre nach Studienabschluss oder Berufseinstieg bzw. bis 3 Jahre nach der Promotion. Personen ohne eine entsprechende akademische Graduierung können nicht aufgenommen werden.

Berufsbegleitend
Das Programm ist berufsbegleitend, d.h. die TeilnehmerInnen müssen während der Weiterbildung aktiv in einem Forschungsfeld tätig sein, das in inhaltlichem und/oder methodischem Zusammenhang mit dem Weiterbildungsprogramm steht.

Begrenzte TeilnehmerInnenzahl
In den Lehrgang werden 40 TeilnehmerInnen aufgenommen. Die Teilnehmerinnen werden mittels eines Begutachtungs- und Juryverfahrens ausgewählt.

Bewerbung

Bewerbungen sind bis 30. Juni 2012 ausschließlich über www.soqua.net möglich.

Folgende Unterlagen sind für die Bewerbung notwendig:
- elektronisches Bewerbungsformular
- Lebenslauf mit wissenschaftlichem Werdegang und gegebenenfalls Publikationsliste
- ca. 1-seitiges Motivationsschreiben
- Empfehlungsschreiben der entsendenden Institution (ArbeitgeberIn/ProjektleiterIn/AuftraggeberIn/Institutsvorstand etc.)
- Kopien der Hochschulabschlusszeugnisse, aus denen die Graduierung hervorgeht

Zertifizierung

Der Lehrgang umfasst eine Präsenzzeit von 32 Seminartagen sowie das Verfassen einer ca. 30-seitigen Abschlussarbeit. Für Seminare und Cluster sind Vorbereitungsarbeiten durchzuführen.

Nach erfolgreichem Abschluss des Lehrgangs erhalten die TeilnehmerInnen ein Zertifikat, das die Teilnahme am Lehrgang bestätigt.

Mit der Absolvierung des Lehrgangs wird kein akademischer Titel erworben.

Der gesamte Lehrgang zählt 40 ECTS-Punkte. Einzelne Seminare und Module werden für Studien an Universitäten angerechnet. Die konkrete Anrechenbarkeit ist bei der jeweiligen Universität anzufragen.

Team

Die Lehrgangsleitung besteht aus:
- Univ.-Doz. Dr. Jörg Flecker
  Wissenschaftlicher Leiter bei FORBA
- Univ.-Prof. Mag. Dr. Josef Hochgerner
  Wissenschaftlicher Leiter des Zentrums für Soziale Innovation (ZSI)
- PD Dr. Ursula Holtgrewe
  Teamleiterin für "Arbeit, Organisation und Internationalisierung" bei FORBA
- Günther Ogris, MA
  Geschäftsführer und wissenschaftlicher Leiter von SORA
- Mag. Dr. Klaus Schuch
  Geschäftsführer des Zentrums für Soziale Innovation (ZSI)

Jedes Seminar wird von einer/m eigenen Seminarverantwortlichen betreut. Diese/r ist für die inhaltliche Entwicklung und für die Abhaltung des Seminars sowie für die Auswahl der Vortragenden verantwortlich.

Als Vortragende werden sowohl ExpertInnen der veranstaltenden Institute als auch zahlreiche nationale und internationale ExpertInnen anderer Organisationen eingeladen. Die Liste der Vortragenden kann sich bis zu Beginn des Lehrgangs oder des jeweiligen Seminars noch ändern bzw. erweitern.
Ein stets aktueller Überblick findet sich auf der Homepage www.soqua.net.

Lehrgang 2012–2014

Oktober 2012–April 2013	**Basisseminare** → Seite 8–15 Zu absolvieren sind alle Seminare aus **Modul 1** und **Modul 2** (je 8 Tage = 16 Tage).	
April 2013–Dezember 2013	**Wahlseminare** → Seite 17–28 Auszuwählen sind je 3 Seminare aus Modul 3 und 2 Seminare aus Modul 4 (je 2 Tage = 10 Tage).	
Jänner 2013–Jänner 2014	**Themen-Cluster** → Seite 29–32 Auszuwählen ist einer von drei Schwerpunkten aus Modul 5 (6 Tage).	
Oktober 2012–Jänner 2014	Zusätzlich zu der Anwesenheit in den Seminaren sind Vorbereitungsaufgaben einzuplanen. Diese werden u.a. über eine Internet-Plattform abgewickelt.	
Jänner 2014–Mai 2014	Am Ende des Lehrgangs ist eine **Abschlussarbeit** im Umfang von ca. 30 Seiten zu verfassen.	

Module

1 Basis der praktischen Projektarbeit
1.1 Anwendungsorientierte Forschung und Verhaltensrichtlinien
1.2 Forschungsprojektmanagement
1.3 Projektökonomie, Budgetierung und Controlling
1.4 Wissenschaftskommunikation

2 Methodische Grundlagen angewandter Sozialwissenschaften
2.1 Quantitative Forschungsmethoden
2.2 Forschungsdesign und Projektkonzeption
2.3 Qualitative Forschungsmethoden

3 Fortgeschrittene Methoden der angewandten Sozialwissenschaften
3.1 Evaluation
3.2 Multivariate Analysemethoden
3.3 Fallstudien als Forschungsstrategie
3.4 Inhaltsanalytische Verfahren
3.5 Soziale Netzwerkanalyse
3.6 Analyse internationaler Datensätze

4 Dimensionen der praktischen Projektarbeit
4.1 Europäische Forschungskooperation
4.2 Organisationen verstehen
4.3 Von der Forschung zur Beratung
4.4 Wissenschaftliches Publizieren und Schreiben (Deutsch und Englisch)

5 Themen der europäischen Sozialforschung
5.1 Innovationen in der Wissensgesellschaft
5.2 Evidenzbasierte Politikgestaltung
5.3 Wirtschaft, Arbeit, Organisation

Basisseminare

1

Modul 1

Basis der praktischen Projektarbeit

Moderne sozialwissenschaftliche Forschung wird großteils arbeitsteilig in Projekten organisiert, wobei nationale und disziplinäre Grenzen zunehmend durchlässiger werden. Gleichzeitig ist eine erfolgreiche Drittmitteleakquisition eine Überlebensfrage. Modul 1 führt in die Grundlagen erfolgreicher wissenschaftlicher Projektarbeit ein.

In **Seminar 1.1** wird die anwendungsorientierte sozialwissenschaftliche Forschung sowohl einer theoretischen als auch einer auf eigener Erfahrung beruhenden Reflexion unterworfen. Begriffe wie Transdisziplinarität oder Mode 1 und Mode 2 werden kritisch hinterfragt und organisatorische Strukturen, Umfeld, Symbolik und andere Einflussfaktoren der anwendungsorientierten Forschung diskutiert. Eine Session beschäftigt sich speziell mit Verhaltensrichtlinien und Forschungsethik.

Anschließend gibt das **Seminar 1.2** eine Einführung in das Management von Forschungsprojekten in Theorie und Praxis. Dabei werden relevante Werkzeuge zur Projektplanung und praktische Tipps zur Projektdurchführung insbesondere von internationalen kollaborativen Projekten vermittelt. Diskutiert und erprobt werden u.a. Aspekte wie Projektstart, interne Kommunikation, Qualitätssicherung, Beziehungsmanagement, Risikomanagement etc.

Seminar 1.3 befasst sich mit Projektökonomie, Budgetierung und Controlling. Dabei werden Besonderheiten in Kalkulation und Abrechnung bei ausgewählten Auftraggeberinnen vorgestellt und diskutiert.

Seminar 1.4 schließlich erarbeitet, wie wissenschaftliche Ergebnisse für unterschiedliche Zielgruppen sinnvoll aufbereitet werden können. Dabei werden auch Öffentlichkeitsarbeit, Vorbereitung auf Interviews und die Kommunikation mit Journalistinnen thematisiert.

Die Basisseminare werden in zwei Gruppen zu je 20 Teilnehmerinnen geführt.

Gruppe A: 4.–5. Oktober 2012
Gruppe B: 11.–12. Oktober 2012

1.1

Anwendungsorientierte Forschung und Verhaltensrichtlinien

Ziele

Das Seminar soll folgende Befähigungen vermitteln bzw. stärken:

- Den gesellschaftlichen Kontext anwendungsorientierter Forschung analysieren.
- Das eigene Berufs- und Kompetenzprofil reflektieren, Entwicklungspotenziale erkennen, von anderen lernen und Handlungsfähigkeit erweitern.
- Ethische Grundsätze wissenschaftlicher Forschung in die Arbeitsorganisation, Kommunikation und Ergebnisverwertung integrieren.

Inhalt

Aktuelle Entwicklungen in Wissenschaft und Forschung allgemein, besonders in der internationalen sozialwissenschaftlichen Forschungskooperation. Was ist gleich bzw. anders gemäß der klassischen Gegenüberstellung von Grundlagen- und angewandter Forschung? Wie weitgehend und unter welchen Bedingungen ist diese Unterscheidung sinnvoll? Welche Auswirkungen haben gesellschaftliche Veränderungen und damit verbundene Erwartungen an Wissenschaft und Forschung für die Praxis sozialwissenschaftlicher Arbeit?

Themen

- Organisatorische Strukturen, Forschungsförderung und das Umfeld anwendungsorientierter Forschung: Institutionen, Finanzierung und Gehälter, Personalentwicklung, gesetzliche Rahmenbedingungen, Verträge
- Gender und andere Faktoren der Formierung von "scientific communities": Herkunft, Status, Migration, sozialer Wandel; Biographien, Karrieren und Sozialtechniken
- Bedingungen der Akquisition und Durchführung von Forschungsprojekten sowie der wissenschaftlichen und praktischen Verwertung von Ergebnissen
- Wissenschaftstheoretische Diskurse (Science Mode 1/Mode 2; Transdisziplinarität); Kooperation und Kommunikation in internationalen Forschungsprojekten
- Wissenschaftliche Standards, geistige Eigentumsrechte und Forschungsethik im internationalen Kontext

ECTS: 2

Seminarverantwortlicher: Univ.-Prof. Mag. Dr. Josef Hochgerner (ZSI)
Vortragende: Mag. Eva Buchinger (AIT), Dr. Birgit Habermann (BOKU Wien), Univ.-Prof. Mag. Dr. Josef Hochgerner (ZSI), PD Dr. Ursula Holtgrewe (FORBA), Dr. Erich Griesler (IHS)

Gruppe A: 18.–19. Oktober 2012
Gruppe B: 8.–9. November 2012

1.2

Forschungsprojektmanagement

Ziele

- Unterscheidung von Projekten und Forschungsprojekten
- Kenntnis und Identifikation geeigneter Projektplanungsinstrumente
- Kenntnis über den Projektablauf und Aufgaben des Projektalltags
- Ausprobieren in der Rolle des Projektkoordinators/der Projektkoordinatorin

Inhalt

Das Seminar gibt eine Einführung in das Management von Forschungsprojekten in Theorie und Praxis. Themen und Beispiele entstammen dem europäischen und internationalen Forschungskontext aus dem Bereich "Technik und Wissen". Den Informations- und Kommunikationstechnologien (IKT) kommt im Rahmen der Forschungs- und Innovationsförderung durch die EU eine besondere Bedeutung zu, da die IKT-Forschung grundlegend für viele Forschungs- und Anwendungsfelder ist. IKT sind sogenannte "enabling technologies", da von den Fortschritten der IKT-Forschung einerseits weitere Innovationssprünge in anderen Wissenschaften zu erwarten sind, anderseits aber auch Verbesserungen in vielen Alltagsbereichen. Dabei ist die Erforschung von Technik allein noch kein Erfolgsgarant für Innovation. Der Erfolg neuer Forschungsergebnisse und Entwicklungen ist davon abhängig, ob diese von der Gesellschaft akzeptiert werden oder nicht. SozialwissenschaftlerInnen sind daher oft auch ständiger Begleiter von IKT-Forschung.

Themen

- Finanzierungsmöglichkeiten von Forschung und Innovation durch die EU
- Werkzeuge der Projektplanung (Projektplanungsphasen, Projektidee und Projektabgrenzung, Projektkonsortium/Aufgaben-/Expertisenmatrix, Projektstrukturplan, Spezifikation der Arbeitspakete, Meilensteinplanung, Gantt Chart, PERT Diagramm, Projektorganigramm, Managementstrukturen, Projektkosten, Aufwandsschätzung)
- Projektdurchführung (Vertragliche Regelungen, Projektstart, Management des Projektteams und interne Kommunikation, Controllinginstrumente, Risikomanagement, Qualitätssicherung, Projektdokumentation, Berichtpflichten und Finanzcontrolling, Projektumfeldanalyse und externe Kommunikation, Projektabschluss und Nachprojektphase)

ECTS: 2

Seminarverantwortliche: Dipl.-M.B. Sylvana Kroop (ZSI)
Vortragende: Dipl.-M.B. Sylvana Kroop (ZSI), N.N.

Gruppe A: 21.–22. März 2013
Gruppe B: 7.–8. März 2013

1.3

Projektökonomie, Budgetierung und Controlling

Ziele

- Einführung in die theoretischen Grundlagen der Projektökonomie
- Antragsphase – Planung des Projektbudgets (Grundsätzliches, nationale Forschungsförderprogramme, EU Forschungsrahmenprogramm)
- Kalkulation eines Tenderangebots aufgrund des Bundesvergabegesetzes
- Projektcontrolling – wann, wozu, welche Hilfsmittel?
- Führung einer Einnahmen-Ausgaben-Rechnung und einer kleinen Buchhaltung
- Abrechnung von Projekten (national, EU)

Inhalt

Um zu überzeugen muss eine gute Projektidee nicht nur adäquat präsentiert werden, sondern der nötige finanzielle und personelle Aufwand sollte gründlich und nachvollziehbar kalkuliert sein. Verschiedene Programme und Ausschreibungen verlangen unterschiedliche Herangehensweisen an die Projektkalkulation, abhängig von den Förderrichtlinien.

In diesem Seminar werden die Teilnehmerinnen und Teilnehmer mit den Do's & Don'ts sowie dem theoretischen und praktischen state-of-art der Projektökonomie, der Budgetierung und des Controlling von FBE-Projekten vertraut gemacht.

Der Schwerpunkt liegt dabei auf nationalen Forschungsförderungsprogrammen und auf dem Europäischen Rahmenprogramm für Forschung, technologische Entwicklung und Demonstration.

Dabei vermittelt das Seminar u.a., wie die Interessen der einreichenden Organisationen bei der Projektkalkulation zu berücksichtigen sind, wie sinnvolles Controlling eines laufenden Projekts aussieht und wie Projekte bei diversen Auftraggebern abgerechnet werden.

ECTS: 2

Seminarverantwortlicher: Mag. Thomas Riesenecker-Caba (FORBA), Dipl.-Übers. Carmen Siller (ZSI)
Vortragende: Mag. Thomas Riesenecker-Caba (FORBA), Dipl.-Übers. Carmen Siller (ZSI)

Gruppe A: 4.–5. April 2013
Gruppe B: 11.–12. April 2013

1.4

Wissenschaftskommunikation

Ziele

Die TeilnehmerInnen wissen, wie wissenschaftliche Forschung und ihre Ergebnisse für unterschiedliche Zielgruppen außerhalb der scientific community (AuftraggeberInnen, Medien, etc.) adressatenorientiert und daher effektiv aufbereitet werden können. Sie bekommen Anregungen für die Öffentlichkeitsarbeit sowie die Vorbereitung auf Interviews und die Kommunikation mit JournalistInnen.

Inhalt

- Marketing und PR-Grundlagen und Nutzen für ForscherInnen
- Adressatenorientierte Kommunikation (Übungen anhand eigener Themen)
- Was KundInnen wollen, oder: Was auftraggeberfreundliches Darstellen von Diplomarbeiten unterscheidet
- Do's & Don'ts rund um Anträge und die Kommunikation mit FördergeberInnen
- Anregungen zum optimalen Texten (Presseinformationen, Online-Texte, Executive Summaries etc.) und zur Vorbereitung mündlicher Präsentationen
- Praxis und Instrumente für eine zeiteffiziente Öffentlichkeitsarbeit; souveräner Umgang mit JournalistInnen

ECTS: 2

Seminarverantwortlicher: Dr. Florian Oberhuber (SORA)
Vortragende: Mag. Christoph Hofinger (SORA), Dr. Florian Oberhuber (SORA), Mag.a Elke Rieger

Basisseminare

2

Modul 2

Methodische Grundlagen angewandter Sozialwissenschaften

Das Basismodul "Methodische Grundlagen angewandter Sozialwissenschaften" setzt bei den meist unterschiedlich vorhandenen Vorkenntnissen der TeilnehmerInnen in den Forschungsmethoden an.

Die drei **Seminare 2.1** "Quantitative Forschungsmethoden", **2.2** "Forschungsdesign und Projektkonzeption" sowie **2.3** "Qualitative Forschungsmethoden" leiten nach einer kurzen Einführung inhaltlich rasch zu den in der Praxis Verwendung findenden methodischen Anwendungen über.

Dieses Modul verfolgt das grundsätzliche Ziel, die TeilnehmerInnen in die Lage zu versetzen, die vertiefenden Wahlseminare mit einem sehr praxisbezogenen methodischen Grundgerüst erfolgreich zu besuchen.

Die Basisseminare werden in zwei Gruppen zu je 20 TeilnehmerInnen geführt.

Gruppe A: 15.–16. November, 6. Dezember 2012
Gruppe B: 22.–23. November, 13. Dezember 2012

2.1

Quantitative Forschungsmethoden

Ziele

- Einsatz quantitativer Methoden in der empirischen Sozialforschung
- Kenntnis ausgewählter Methoden: mathematisch-statistische Grundlagen, Anwendung auf konkrete Forschungsfragen
- Eigenständiges Anwenden der Methoden mit statistischer Software
- Grundlagen, Tipps und Tricks für die Durchführung von Umfragen (Studiendesign, Fragebogenkonstruktion, Gewichtung, Auswertung)

Inhalt

In diesem Seminar werden Einsatzbereiche der quantitativen Sozialforschung sowie ausgewählte Methoden vermittelt.

Augenmerk wird dabei auch auf Planung und Durchführung quantitativer Erhebungen gelegt (Surveydesign). Schwerpunkt ist aber das Üben ausgewählter quantitativer Methoden, die in der empirischen Sozialforschung häufig zum Einsatz kommen. Das Seminar wird sich so weit wie möglich an konkreten Forschungsfragen orientieren.

Themen

- Grundlagen des quantitativen Forschens/Begriffsklärung
- Elemente des Surveydesigns: Stichproben, Erhebungsmethoden, Fragebogengestaltung, Gewichtung, Vermeidung von häufigen Fehlerquellen in der Datenanalyse
- Überblick über gängige Statistik-Software, Vor- und Nachteile der verschiedenen Packages (SPSS, STATA, R)
- Tipps und Tricks für Datenmanagement und Variablenbearbeitung
- Mathematisch-statistische Grundlagen, Voraussetzungen an die Daten
- Varianz, Kovarianz und Korrelation als Basis für höhere Verfahren
- Überblick über ausgewählte höhere Verfahren (wie Regression, Faktorenanalyse, Strukturgleichungsmodelle)
- Einsatzgebiete, Forschungsfragen

ECTS: 3

Seminarverantwortlicher: Mag. Christoph Hofinger (SORA)
Vortragende: Mag. Christoph Hofinger (SORA), Mag.a Stefanie Smoliner (ZSI), Mag. Christoph Waldhauser (SORA, WU Wien), Mag.a Martina Zandonella (SORA), Bsin Eva Zeglovits (Universität Wien)

Gruppe A: 7. Dezember 2012
Gruppe B: 14. Dezember 2012

2.2

Forschungsdesign und Projektkonzeption

Ziele

Die TeilnehmerInnen sollen zur Erstellung eines Forschungsdesigns mit vorgegebenem Rahmen (Einschränkungen aufgrund z.B. finanzieller Ressourcen) befähigt werden. Besonderes Augenmerk wird auf die Kombinationsmöglichkeiten unterschiedlicher Forschungsmethoden gelegt.

Inhalt

Ausgehend von einer Auseinandersetzung mit dem theoretischen Hintergrund zur Erstellung eines Forschungsdesigns wird die Konzeption von sozialwissenschaftlichen Forschungsprojekten praktisch erprobt und reflektiert.

Themen

- Forschungsprozess unter Berücksichtigung unterschiedlicher Forschungsansätze (z.B. qualitativ vs. quantitativ, explorativ vs. konfirmatorisch)
- Überblick über quantitative und qualitative Designs und Methoden
- Überblick der Erhebungsformen und Kombinationsmöglichkeiten (Was ist für welche Fragestellung geeigneter?)
- Qualitative und quantitative Stichprobenziehung

ECTS: 1

Seminarverantwortliche: Mag.a Isabella Kaupa (MelangeC)
Vortragende: Mag.a Isabella Kaupa (MelangeC)

Gruppe A: 14.–15. Februar 2013, 7.–8. März 2013
Gruppe B: 21.–22. Februar 2013, 21.–22. März 2013

2.3

Qualitative Forschungsmethoden

Ziele

Das Ziel des Seminars besteht darin, die Anwendung ausgewählter qualitativer Auswertungsverfahren praktisch zu erproben und zu reflektieren.

Theoretisches Wissen zu Methodologie und Methoden der qualitativen Sozialforschung sowie die Kenntnis gängiger qualitativer Erhebungsverfahren werden weitgehend vorausgesetzt.

Inhalt

In diesem Seminar werden auf der Grundlage des qualitativen Paradigmas der Sozialforschung ausgewählte Methoden vorgestellt, angewendet und diskutiert.

Besonderes Augenmerk wird dabei auf die Konzeption, Planung und Durchführung qualitativer Studien gelegt. Als zentrale Erhebungsmethoden werden qualitative Interviews und Fokusgruppen gegenübergestellt und in Hinblick auf ihre Einsatzmöglichkeiten reflektiert. Ein weiterer Schwerpunkt liegt bei der Auswertung und Interpretation des erhobenen Materials.

Der Kurs wird sich an konkreten Forschungsfragen orientieren. Die Teilnehmerinnen erhalten die Möglichkeit, die wichtigsten Schritte des fallstudienorientierten Forschens zu üben. Auch technische Fragen der Dokumentation (digital audio/video) und Auswertung (Software) werden erörtert.

Themen

- Konzeption von Case Studies
- Erhebungsmethoden: qualitative Einzel-Interviews (Leitfadeninterview, Expertinneninterview, problemzentriertes und narratives Interview) und Fokusgruppen
- Analyseverfahren: objektive Hermeneutik, Grounded Theory
- Softwareanwendung

ECTS: 4

Seminarverantwortliche: Mag.a Isabella Kaupa (MelangeC)
Vortragende: Mag.a Isabella Kaupa (MelangeC), Mag.a Ursula Breitenfelder, MSc. (SORA)

25.–26. April 2013

3.1

Evaluation

Ziele

- Verstehen, was Evaluation bedeutet, was Evaluation leisten kann und welche Standards zu beachten sind. Die Begrifflichkeiten, die im Evaluationsalltag auftauchen, kennenlernen und sie unterscheiden können. Wissen, wie Evaluationen beauftragt werden und das Kunden-EvaluatorIn-Verhältnis reflektieren können.
- Gängige Evaluationsziele kennenlernen und wissen, welche Begrenzungen und welche Zugänge diesbezüglich zu berücksichtigen sind. Verstehen, welche zentrale Rolle dabei die Indikatorenentwicklung spielt.
- Anhand von Praxisbeispielen nachvollziehen, wie und wann welche Methoden geeignet sind, um vorab definierte Evaluationsziele bestmöglich zu erreichen.

Inhalt

Evaluation ist zu einem wichtigen Anwendungsbereich sozialwissenschaftlicher Tätigkeit geworden; nicht zuletzt aufgrund europäischer Vorgaben und Transfers in Programmgestaltung und Programmimplementierung.

Das Seminar bietet einen Überblick über normgebende Standards und die verschiedenen Begriffsdimensionen und Konzepte, die uns im Evaluationsalltag begegnen (z.B. "empowerment evaluation"; "impact-evaluation"). Darüber hinaus wird auf die konkrete Ausschreibungspraxis eingegangen (insbesondere das österreichische Bundesvergabegesetz) und im Erfahrungsaustausch reflektiert, welche Rolle der Evaluator/die Evaluatorin im Beziehungsgefüge AuftraggeberIn/Evaluationsobjekt einnimmt, welche Funktionen dabei relevant sind und welche ethischen Fragen zu berücksichtigen sind. Gängige Evaluationsziele sowie der Einsatz von geeigneten Methoden werden im Sinne eines exemplarischen Unterrichts vermittelt, indem zentrale Aspekte der Formulierung von Evaluationszielen und Evaluationsdesigns, der Indikatorenbildung und der angewandten Methoden anhand von Praxisbeispielen vorgestellt und diskutiert werden. Der Schwerpunkt liegt dabei auf Programm- und Projektevaluation.

ECTS: 2

Information: Die Seminarteilnehmerinnen werden selbst kurze Referate über Evaluationsbeispiele aus der FTEVAL-Datenbank in Kleingruppenarbeit durchführen: www.fteval.at/cms/
Empfohlenes Wahlfach für den Cluster "Innovationen in der Wissensgesellschaft"

Seminarverantwortlicher: Mag. Dr. Klaus Schuch (ZSI)
Vortragende: Mag. Dr. Klaus Schuch (ZSI), Mag. Klaus Zinöcker (WWTF + geschäftsführender Koordinator der Plattform Forschungs- und Technologieevaluierung), Mag.a Ilse Marschalek (ZSI), Mag. Robert Hörmann (prove)

Wahlseminare

3

Modul 3

Fortgeschrittene Methoden der angewandten Sozialwissenschaften

Für die erfolgreiche Durchführung komplexer Studien ist es hilfreich, unterschiedliche methodische Ansätze zu kennen, sie kombinieren zu können und sie so einzusetzen, dass sie sich jeweils ergänzen. Das Modul 3 wird anhand gezielter Fokussierung auf ein bestimmtes Paradigma lösungsorientierte Lösungsansätze präsentieren, welche die Notwendigkeiten in der Praxis reflektieren.

Dieses Modul setzt dabei bei den vermittelten Grundkenntnissen aus den Modulen 1 und 2 an und dient dem Aufbau und der Erweiterung der methodischen Qualifikation der Teilnehmerinnen. Weiterführende Analysetechniken auf der Basis von Beispielen aus der Forschungspraxis von nationalen und internationalen Sozialwissenschaftlerinnen werden dargestellt und vermittelt.

Jeweils zwei der vorliegenden Methoden-Seminare sind zur Unterstützung der Arbeit in einem Themencluster des Moduls 3 vorgesehen. Wir empfehlen den Teilnehmerinnen daher, die ihrem Themen-Cluster entsprechenden Methoden-Seminare zu wählen.

Seminar 3.1 beschäftigt sich mit Ansätzen und Methoden der Evaluation und **Seminar 3.5** mit Sozialer Netzwerkanalyse. Sie werden vor allem den Teilnehmerinnen des Themen-Clusters "Innovationen in der Wissensgesellschaft" empfohlen.

Seminar 3.2 "Multivariate Analysemethoden" sowie **3.4** "Inhaltsanalytische Verfahren" bringen den Teilnehmerinnen des Themen-Clusters "Evidenzbasierte Politikgestaltung" wichtige methodische Fundierung.

Für die Teilnehmerinnen des Clusters "Wirtschaft, Arbeit und Organisation" sind in erster Linie die **Seminare 3.3** "Fallstudien als Forschungsstrategie" und **3.6** "Analyse internationaler Datensätze" vorgesehen.

16.–17. Mai 2013

3.2

Multivariate Analysemethoden

Ziele

- Das Seminar zeigt am Beispiel von drei komplexen Methoden, wie Datensätze für ein tiefer gehendes Verständnis analysiert werden können
- Die Teilnehmerinnen gewinnen ein Grundwissen über die Basiskonzepte der komplexen Datenanalyse
- Durch Ausprobieren der erlernten Methoden sollen die Teilnehmerinnen ihr erlerntes Wissen auf eigene Datensätze anwenden können

Inhalt

Der Kurs basiert auf dem Seminar 2.1 und erweitert die dort erworbenen Analysetechniken um komplexe multivariate Methoden. Multiple Regression, Faktorenanalyse und Strukturgleichungsmodelle sind drei der wichtigsten Analysemethoden für die Beschreibung von komplexen Zusammenhängen und Phänomenen in den Sozialwissenschaften. Besonders durch die Zunahme von "cross-cultural survey research" in Europa gewinnen diese Methoden immer stärker an Relevanz.

Im Seminar werden die grundlegenden Konzepte erläutert und auf deren Logiken, Konzepte und die Mathematik eingegangen. Um ein erweitertes Verständnis für die Datenanalyse zu gewinnen, wird gezeigt, wie und warum diese drei Methoden miteinander verknüpft sind.

Ziel des Seminars ist es, das notwendige Verständnis für eine sichere Anwendung dieser Verfahren zu entwickeln.

ECTS: 2

Information: Empfohlenes Wahlfach für den Cluster "Evidenzbasierte Politikgestaltung"

Seminarverantwortlicher: Günther Ogris, MA (SORA)
Vortragende: Mag. Christoph Hofinger (SORA), Günther Ogris, MA (SORA), Mag.a Martina Zandonella (SORA)

6.–7. Juni 2013

3.3

Fallstudien als Forschungsstrategie

Ziele
- Erarbeitung möglicher Designs fallstudienbasierter Untersuchungen
- Kennenlernen der Methoden zur Erstellung von Fallstudien sowie der Techniken zur (international) vergleichenden Auswertung
- Fallstudien im Kontext von Multi-Methoden-Designs
- Kenntnis der Möglichkeiten und Grenzen der Methoden

Inhalt

Fallstudien unter Verwendung (überwiegend) qualitativer Methoden der Datenerhebung und -analyse kommen in nationalen wie internationalen Projekten häufig zum Einsatz. Sie werden für Zwecke der Deskription oder Illustration sozialer Zusammenhänge, für die Exploration neuer Forschungsfelder, aber auch für die Erklärung komplexer Sachverhalte eingesetzt (Yin 2003). Gegenstand von Fallstudien können dabei Individuen mit ihren Biographien oder spezifischen Erfahrungen sein, Betriebe und andere Organisationen oder auch Institutionen auf regionaler oder nationaler Ebene, deren Praxen und Funktionsweisen untersucht und verglichen werden.

Die Durchführung von Fallstudien ist mit bestimmten Herausforderungen verbunden: Gleichzeitig dem Einzelfall in seinen spezifischen Kontexten gerecht zu werden und die Vergleichbarkeit sicherzustellen, Erhebungs- und Auswertungsprozeduren auch in verteilten und internationalen Teams zu vereinheitlichen und Schlüsse über das Untersuchungsfeld insgesamt aus der Analyse einer größeren Zahl von Fällen zu ziehen.

Fallstudien selbst sind meist Multi-Methoden-Designs, die Interviews, Dokumentenanalysen, u.U. auch Befragungen enthalten. Darüber hinaus werden in größeren Projekten Fallstudien vielfach komplementär zu anderen Untersuchungen (z.B. Befragungen) eingesetzt. Dann können sie soziale Zusammenhänge illustrieren oder zur Erklärung und Vertiefung statistischer Befunde beitragen.

ECTS: 2

Information: Empfohlenes Wahlfach für den Cluster "Wirtschaft, Arbeit, Organisation"; Seminarsprachen: Deutsch und Englisch

Seminarverantwortliche: PD Dr. Ursula Holtgrewe (FORBA)
Vortragende: PD Dr. Ursula Holtgrewe (FORBA), Univ.-Doz. Dr. Jörg Flecker (FORBA), N.N.

21.–22. November 2013

3.5

Inhaltsanalytische Verfahren

Ziele
- Überblick über Formen und Anwendungsmöglichkeiten quantitativer wie qualitativer Inhaltsanalyse
- Kennenlernen der zentralen Verfahren inhaltsanalytischer Forschung (deskriptiver, diagnostischer, prognostischer Ansatz etc.)
- Bisherige eigene Praxis reflektieren und Verbesserungspotenziale erkennen
- Anwendungsorientiertes Wissen aufbauen, um Projekte planen und durchführen zu können.

Inhalt

Inhaltsanalytische Verfahren spielen in der Forschungspraxis eine große Rolle, gleichzeitig wird gerade diese Methode häufig unreflektiert verwendet und in ihrem Potenzial nicht ausgeschöpft.

Das Seminar gibt einen Überblick über Leistungen und Anwendungen quantitativer wie qualitativer Inhaltsanalyse. Die TeilnehmerInnen erlernen die zentralen Arbeitsschritte der Inhaltsanalyse und erhalten einen Werkzeugkoffer von in der Praxis bewährten Verfahren und Analyse-Instrumentarien. Diese sind flexibel und können auf Materialien aller Art (Transkripte, Pressetexte, Webtexte, TV-Formate, Radiobeiträge usw.) sowie Korpora unterschiedlichen Umfangs angewandt werden. Die zentralen inhaltsanalytischen Tools werden anhand konkreter Forschungsprojekte demonstriert und im Seminar praktisch geübt.

ECTS: 2

Information: Empfohlenes Wahlfach für den Cluster "Evidenzbasierte Politikgestaltung"

Seminarverantwortlicher: Dr. Florian Oberhuber (SORA)
Vortragende: Dr. Florian Oberhuber (SORA), Mag.a Dr.in Gabriela Tatzl

24.–25. Oktober 2013

3.4

Soziale Netzwerkanalyse

Ziele
- Verstehen der Grundbegriffe der Sozialen Netzwerkanalyse (Zentralitäten, Cliquen, etc.) und Kennen von Software zur Anwendung der Methode
- Erkennen von Forschungsfragestellungen, für die die Anwendung der Methode geeignet ist und jenen, wo sie nicht geeignet ist. Hinterfragen und Analysieren der Ergebnisse
- Erstellen erster Analysen netzwerkanalytischer Daten

Inhalt

Das Seminar stellt die Methode und Anwendungsgebiete der Analyse sozialer Netzwerke (SNA) vor. Die Diskussion von zentralen Konzepten, konkreten Beispielen und das Durchführen praktischer Übungen sollen die Möglichkeiten, aber auch die Grenzen der Anwendbarkeit dieser Methode aufzeigen: Für welche Forschungsfragen kann die Methode angewendet werden, und für welche ist sie nicht geeignet?

Nach einer kurzen Einführung in den theoretischen Hintergrund und einer Erläuterung der Grundbegriffe liegt der Fokus auf der praktischen Anwendung der SNA. Dazu werden auch Beispiele aus verschiedenen Forschungskontexten (von erfolgreicher wie auch nicht erfolgreicher Anwendung) diskutiert.

Die Methoden der SNA ermöglichen eine Analyse der Beziehungen von AkteurInnen innerhalb einer Gruppe (z.B. Personen oder Organisationen). Sie helfen Beziehungsmuster sowie die Entstehung und Veränderung von Strukturen sichtbar zu machen und Schlüsse daraus zu ziehen.

Neben der Vorstellung dieser Methoden sowie der Möglichkeiten und Grenzen ihrer Anwendung wird im Seminar erörtert, was mit den Ergebnissen einer SNA ausgesagt werden kann. Spezifische Probleme, wie zum Beispiel bei der Datenerfassung und Akteursauswahl, werden ebenso Themen des Seminars wie der generelle Forschungsablauf und mögliche Forschungsdesigns. Gängige Software-Anwendungen, die die SNA unterstützen, darunter auch Werkzeuge und Methoden zur Visualisierung von Netzwerken und Netzwerkanalysen werden vorgestellt und erprobt.

In praktischen Übungen werden die Studierenden Netzwerkdaten erheben, darstellen und analysieren.

ECTS: 2

Information: Empfohlenes Wahlfach für den Cluster "Innovationen in der Wissensgesellschaft"

Seminarverantwortliche: Mag.a Elke Dall (ZSI)
Vortragende: Mag.a Elke Dall (ZSI), Mag. Alexander Kesselring (ZSI), DI Dietmar Lampert (ZSI), Mag. Lukas Zenk (Donau Uni Krems)

12.–13. Dezember 2013

3.6

Analyse internationaler Datensätze

Ziele
- Überblick über relevante europäische Datenquellen zu Arbeit, Organisation und Lebensqualität: Amtliche Statistiken, Erhebungen, selbst durchgeführte Untersuchungen
- Reflexion der Möglichkeiten, sekundäre oder selbst erhobene Daten in der eigenen Forschung einzusetzen
- Stellenwert der Analyse internationaler Datensätze in der angewandten Forschung

Inhalt

Im Seminar sollen unter anderem folgende Fragen geklärt werden:
- Welche Datensätze bieten amtliche Statistiken wie der Labour Force Survey oder EU-SILC, Erhebungen wie der Working Conditions Survey, nationale Betriebspanels in verschiedenen Ländern etc.?
- Wie brauchbar sind die Datensätze für die Beantwortung verschiedener Forschungsfragen?
- Was sind relevante Indikatoren für Arbeit, Organisation, Lebensqualität?
- Wie vergleichbar sind Konzepte, Operationalisierungen, Untersuchungsdesigns in unterschiedlichen Ländern?
- Was sind die politischen Kontexte und Auswirkungen internationaler Vergleiche (Benchmarking, Open Method of Co-ordination usw.)?

ECTS: 2

Information: Empfohlenes Wahlfach für den Cluster "Wirtschaft, Arbeit, Organisation"; Seminarsprachen: Deutsch und Englisch

Seminarverantwortliche: PD Dr. Ursula Holtgrewe (FORBA)
Vortragende: Dr. Angelika Kümmerling oder Christine Franz (IAQ, Universität Duisburg-Essen), N.N.

Wahlseminare

4

Modul 4

Dimensionen der praktischen Projektarbeit

Die beste Analyse und die beste Methodenkompetenz nützen wenig, wenn die beauftragte oder getätigte Forschungsarbeit nicht anschlussfähig ist, nicht verstanden wird, weder akademisch noch praxisrelevant kann in Wirkung gesetzt werden kann bzw. den Anforderungen von Auftraggeberlnnen nicht genügt.

Modul 4 baut auf den Kompetenzen von Modul 3 auf und erweitert bzw. vertieft diese.

Seminar 4.1 hat die europäische Forschungskooperation zum Thema und greift aktiv auf den Erfahrungsschatz erfolgreicher österreichischer Projektträgerlnnen zurück. Nach einer Einführung in die Logik europäischer Förderprogramme werden mit Hilfe eines Projektbeispiels Aspekte des Forschungsantragsschreibens, des Forschungsdesigns, der Ressourcenplanung und der Projektevaluation kritisch beleuchtet.

In **Seminar 4.2** wird vermittelt, wie man mit einem systemischen Blick das Verständnis für Organisationen erarbeitet, die für die Sozialforschung relevant sind, und welche Konsequenzen sich daraus für die Gestaltung von Projekt-Kooperationen zwischen Organisationen ergeben, die mit unterschiedlichen Logiken operieren.

"Von der Forschung zur Beratung" ist Thema von **Seminar 4.3**. Das Seminar vermittelt den neuesten Unterscheidungen von Beratung und den damit verbundenen unterschiedlichen Haltungen und Herangehensweisen. Es zeigt außerdem Kernelemente von Beratung von der Ziel- und Auftragsklärung über die Projektarchitektur bis hin zur Workshop-Gestaltung.

Schließlich wird in **Seminar 4.4** wissenschaftliches Präsentieren und Schreiben (in englisch und deutsch) thematisiert und geübt. Zentrale Inhalte betreffen die Art und Weise, wie wissenschaftliche Ergebnisse für die Fachöffentlichkeit gut verständlich, attraktiv zu lesen, nachprüfbar und möglichst breit zugänglich publiziert werden können.

26.–27. September 2013

4.1

Europäische Forschungskooperation

Ziele

Das Seminar verfolgt folgende Lernziele:

- Kennenlernen der wichtigsten europäischen Forschungsförderungsprogramme
- Wissen über die Ziele auf europäischer Ebene, Einschätzung der Relevanz für Sozialwissenschaften und die Umsetzung der Programme (Rahmenprogramm, Horizon 2020)
- Kennenlernen von zentralen Aspekten, die einen guten Projektantrag für europäische Forschungskooperation ausmachen
- Diskussion praktischer Probleme

Inhalt

Europäische Forschungsförderung spielt für die österreichischen Sozialforscherlnnen eine bedeutende Rolle, derzeit z.B. das 7. EU Forschungsrahmenprogramm, Life-Long-Learning, COST und andere. Zahlreiche Programme werden mit dem Ende der Finanzperiode 2013 umgestaltet: Das neue Rahmenprogramm für Forschung und Innovation mit einer Laufzeit von 2014 bis 2020 ist Horizon 2020.

Das Seminar wird von forschenden PraktikerInnen gestaltet und von der österreichischen nationalen Kontaktstelle für das Rahmenprogramm (FFG) begleitet. Die ReferentInnen teilen ihre Erfahrungen aus dem 5., 6. und 7. Rahmenprogramm und beschreiben die teilweise immer komplexer werdenden Anforderungen und Herausforderungen bei der Beteiligung.

Das Seminar geht über die deskriptive Vermittlung herkömmlicher Informationsveranstaltungen hinaus und greift auf den aktiven Erfahrungsschatz erfolgreicher ProjektträgerInnen zurück. Dabei wird insbesondere auch bedeutsames nicht-kodifiziertes Wissen mit Hilfe von interaktiven Lehrmethoden vermittelt. Der professionelle Aufbau von Projektanträgen, Konsortialbildung, praktische Probleme bei der Antragstellung, Implementierung und Abschluss europäischer Forschungsprojekte werden ebenfalls diskutiert.

Das Seminar beschäftigt sich auch mit den Teilnahmeregelungen und den zu erwartenden Prozessen für die neuen Programme, insbesondere für Horizon 2020.

ECTS: 2

Information: In der Veranstaltung wird Bezug genommen auf die Seminare 1.2 "Forschungsprojektmanagement" und 1.3 "Projektökonomie, Budgetierung und Controlling"

Seminarverantwortliche: Mag.a Elke Dall (ZSI)
Vortragende: Mag.a Elke Dall (ZSI), Mag.a Stephanie Rammel (FFG)

10.–11. Oktober 2013

4.2

Organisationen verstehen

Ziele

In diesem Seminar soll vermittelt werden, wie man sich mit einem systemischen Blick das Verständnis für Organisationen erarbeitet, die für die Sozialforschung relevant sind, und welche Konsequenzen sich daraus für die Gestaltung von Projekt-Kooperationen zwischen Organisationen ergeben, die mit unterschiedlichen Logiken operieren.

An sozialwissenschaftlichen Forschungsprojekten sind verschiedene Organisationen beteiligt: Die Organisation(en) der AuftraggeberInnen sowie eine oder mehrere Forschungseinrichtungen (bei Kooperationsprojekten). In vielen Fällen ist auch das Forschungs"objekt" eine Organisation, beispielsweise bei Evaluierungen oder MitarbeiterInnenbefragungen. Das Verstehen dieser unterschiedlichen Organisationen, das Erkennen ihrer jeweiligen Besonderheiten und Dynamiken und der richtige Umgang mit unterschiedlichen Kulturen sind eine wesentliche Voraussetzung für den Erfolg des Forschungsprojekts.

Inhalt

- Organisationstypen und ihre Besonderheiten (NPO's, Öffentliche Verwaltung, Projektorganisationen, Netzwerke), Systemlogiken, Organisationsmetasphern
- Wie lerne ich eine Organisation kennen? Relevante Informationen beschaffen, Fragetechniken, Hypothesenbildung, Landkarten von Organisationen
- Jede Organisation hat ihre eigene Kultur. Wie wirkt sich das auf die Kooperationsbeziehung aus?
- Organisationen als politische Systeme, Mikropolitik
- Forschung und deren Ergebnisse sind Interventionen. Was gilt es dabei zu berücksichtigen?

ECTS: 2

Seminarverantwortliche: Mag.a Ursula Breitenfelder, MSc. (SORA)
Vortragende: Mag.a Ursula Breitenfelder, MSc. (SORA), Mag.a Isabelle Kaupa (MelangeC)

7.–8. November 2013

4.3

Von der Forschung zur Beratung

Ziele

KundInnen und AuftraggeberInnen von Forschung erwarten zunehmend auch auf Forschungsergebnissen aufbauende Fachberatung oder den Forschungsprozess begleitendes, die Organisation unterstützendes Projektmanagement bis hin zur Prozessberatung. Dies bedeutet für ForscherInnen die Notwendigkeit, neue Qualifikationen im Bereich der Beratung zu erlernen, aber auch die unterschiedlichen Arten von Beratung zwischen Fach- und Prozessberatung zu verstehen, um sich selbst in der Beratung besser verorten und positionieren zu können. Das Seminar vermittelt die relevanten Unterscheidungen von Beratung und die damit verbundenen unterschiedlichen Haltungen und Herangehensweisen. Es zeigt außerdem Kernelemente von Beratung von der Ziel- und Auftragsklärung über die Projektarchitektur bis hin zur Workshop-Gestaltung. Darüber hinaus wird in dem Seminar thematisiert, welche Beratungsfelder es im sozialwissenschaftlichen Umfeld gibt, näher eingegangen wird dabei auf Beratung im politischen Bereich.

Inhalt

- Wie können Forschung und Beratung miteinander verknüpft werden?
- Begriffsklärungen: Fachberatung, Prozessberatung, systemische Beratung
- Umgang mit unterschiedlichen Rollen und Erwartungen (ForscherIn, FachberaterIn, ProzessberaterIn)
- Fragetechniken in Forschung und Beratung
- Elemente der Beratung:
  Ziel- und Auftragsklärung
  Projektarchitektur
  Prozesssteuerung und -unterstützung
  Workshop-Gestaltung
- Beratungsfelder im sozialwissenschaftlichen Umfeld, Beratung in der Politik

ECTS: 2

Seminarverantwortliche: Mag.a Ursula Breitenfelder, MSc. (SORA)
Vortragende: Mag.a Ursula Breitenfelder, MSc. (SORA), Günther Ogris, MA (SORA), Mag. Oliver Schrader (TRAIN Consulting)

5.–6. Dezember 2013

4.4

Wissenschaftliches Publizieren und Schreiben (Deutsch und Englisch)

Ziele

Das Seminar soll folgende Befähigungen vermitteln bzw. stärken:

- Die Relevanz wissenschaftlicher Publikationen für Wissenschaft, Praxis und die persönliche Karriere erkennen und reflektieren
- Publikationsmedien und -möglichkeiten kennenlernen
- Verständlich und genau schreiben
- Kritik üben und mit Kritik umgehen

Inhalt

Zentrale Inhalte betreffen die Art und Weise, wie wissenschaftliche Ergebnisse für die Fachöffentlichkeit gut verständlich, attraktiv zu lesen, nachprüfbar und möglichst leicht zugänglich publiziert werden können. Dazu gehört einerseits die gründliche und kritische Auseinandersetzung mit den eigenen Ergebnissen, das Schreiben selbst, die Auswahl des richtigen Mediums (Überblick und Zugang), sowie die Kommunikation mit RedakteurInnen, HerausgeberInnen, RezensentInnen, LeserInnen und einer weiteren (Medien-)Öffentlichkeit.

Themen

- Wie deute, gewichte und beschreibe ich meine Ergebnisse für mich selbst?
- Was davon ist für welche wissenschaftliche Fachpublikation geeignet und interessant?
- Welche Medien gibt es und kommen infrage: Zeitschriften, Buchbeiträge, Buchpublikation, online-Publikation, eJournals, Sprache (Deutsch oder Englisch)?
- Wann und zu welchem Zweck soll ich mich an "Impact-Faktoren" orientieren?
- Die Beschränkungen von Zeit und Geld
- Der Terror der leeren ersten Seite, die Organisation von Schreibprozessen, Korrekturen und wann wie Hilfe in Anspruch genommen werden kann und soll
- Zeitgerecht abgeben, Akzeptanz und Verarbeiten von Kritik in einem Peer-Review Verfahren
- Lesen und Gutachten schreiben
- Kommunikation nach und neben der wissenschaftlichen Publikation

ECTS: 2

Seminarverantwortlicher: Univ.-Prof. Mag. Dr. Josef Hochgerner (ZSI)
Vortragende: Mag.a Eva Buchinger (AIT), Dr. Liana Giorgi, Univ.-Prof. Mag. Dr. Josef Hochgerner (ZSI), Univ.-Doz. Dr. Michael Ornetzeder (ÖAW)

Themen-Cluster

5

Modul 5

Themen der europäischen Sozialforschung

Modul 5 beschäftigt sich in drei Clustern mit aktuellen Themen der europäischen Sozialforschung, die für die Entwicklung moderner Gesellschaften von zentralem Interesse sind.

Die **Themen-Cluster**

- vermitteln grundlegende theoretische Ansätze und initiieren die Diskussion einzelner Aspekte am aktuellen Stand der Forschung
- finden an insgesamt sechs Tagen in vier Blöcken
- mit unterschiedlichen Formaten (Vortrag, Workshop, Übung, ...) statt
- bilden die Basis für die Themenwahl der Abschlussarbeit
- sind mit den Lerninhalten der anderen Module verschränkt – vor allem mit je zwei der Wahlseminare in Modul 3, die den Teilnehmerinnen dieses Clusters bevorzugt empfohlen werden.

Im **Mittelpunkt von Themen-Cluster 5.1** stehen "Innovationen in der Wissensgesellschaft". Thematisiert werden Konzepte im Bereich der Innovationsforschung und der Wissenschaftshermeneutik sowie Zusammenhänge zwischen Innovation, Wissen und Ökonomie.
→ **Empfohlene Wahlseminare: 3.1 und 3.4**

Themen-Cluster 5.2 beschäftigt sich mit theoretischen und methodischen Grundkonzepten "Evidenzbasierter Politikgestaltung". Der Praxisbezug wird durch Anwendungsbeispiele aus dem beruflichen Umfeld der Teilnehmerinnen hergestellt.
→ **Empfohlene Wahlseminare: 3.2 und 3.5**

Um "Wirtschaft, Arbeit, Organisation" geht es schließlich in **Cluster 5.3**. Die sozialwissenschaftlichen Kernkonzepte zu diesen Themen und ihr Zusammenspiel werden beleuchtet, aktuelle Debatten und Forschungsergebnisse diskutiert.
→ **Empfohlene Wahlseminare: 3.3 und 3.6**

Bei der Anmeldung entscheiden sich die BewerberInnen für einen Themen-Cluster. Es wird eine gleichmäßige Aufteilung der TeilnehmerInnen auf die drei Cluster angestrebt. Diese erfolgt im Rahmen des Auswahlverfahrens unter Berücksichtigung der Prioritäten der BewerberInnen und den Empfehlungen der GutachterInnen. Details zu den Anmeldemodalitäten und das Anmeldeformular finden Sie auf www.soqua.net.

17.–18. Jänner 2013
21. Juni 2013
6. September 2013
15.–17. Jänner 2014

5.1

Innovationen in der Wissensgesellschaft

Ziele

Ziel dieses Clusters ist es, einen theoriereflexiven Diskurs mit dem Seminarthema einzuleiten, wobei folgende Schwerpunkte gesetzt werden:

- Vermittlung einer robusten Innovationshermeneutik
- Auseinandersetzung mit aktuellen gesellschaftlichen Labels wie "Wissensgesellschaft", "sozialer Innovation", "open Innovation" etc.
- praxisrelevante Ansätze der Forschungs-, Technologie- und Innovationspolitiken kennanzulernen und kritisch zu hinterfragen
- Entwicklung der Abschlussarbeiten der TeilnehmerInnen dieses Clusters

Inhalt

Seit der industriellen Revolution wird die Bedeutung von technologischem Fortschritt und Innovation für die ökonomische und gesellschaftliche Entwicklung als entscheidend angesehen. Wissen sowie der Zugang zu Wissen gelten auf individueller, gesellschaftlicher und staatlicher Ebene als Trennlinien zwischen "Habenden" und "Nicht-Habenden".

Zunächst werden die Entwicklung des Innovationsbegriffs sowie grundlegende Konzepte vorgestellt. Darauf aufbauend folgen Vertiefungen in spezifischen Fragestellungen:

- Die Manifestation von Wissen und Innovation in Technik und ihre Bedeutung für die Ökonomie (inkl. einer Reflexion des Themas im Kontext des globalisierten Finanzkapitalismus und neoliberaler Wirtschaftspolitik)
- Entwicklung der Forschungs-, Technologie- und Innovationspolitik in Österreich und der EU sowie ihre Manifestation in Paradigmen, Strategien und Instrumenten
- Soziale Innovation, Konzepte über die wirtschaftliche Verwertungslogik hinaus, Kriterien und Kategorien jenseits der im "Oslo-Manual" definierten Indikatoren zur Bestimmung von Innovation i.w.S.
- Auseinandersetzung mit der Frage, welches fachübergreifende Wissen aus sozialwissenschaftlicher Perspektive für die Erforschung der Gegenwartsgesellschaft und ihrer durch Ökonomie und Innovation wesentlich angetriebenen Entwicklung erforderlich ist.

ECTS: 6

Information: Empfohlene Wahlfächer: 3.1 "Evaluation", 3.4 "Soziale Netzwerkanalyse"

Cluster-Verantwortlicher: Mag. Dr. Klaus Schuch (ZSI)
Vortragende: Mag.a Eva Buchinger (AIT), Univ.-Prof. Mag. Dr. Josef Hochgerner (ZSI), MMag. Alexander Degelsegger (ZSI), Mag. Dr. Stephan Schulmeister (WIFO)

24.–25. Jänner 2013
14. Juni 2013
13. September 2013
23.–24. Jänner 2013

5.2

Evidenzbasierte Politikgestaltung

Ziele

- Kenntnis des politischen Systems und der Schnittstellen zur Wissenschaft
- Kenntnis der theoretischen und methodischen Grundlagen evidenzbasierter Arbeitsweisen
- Diskussion der Reichweite von sozialwissenschaftlichen Forschungsdesigns und deren Nutzen für die Evidenzbasierung
- Kommunikation wissenschaftlicher Ergebnisse an AkteurInnen der Politikgestaltung

Inhalt

Studien werden von der Verwaltung oft beauftragt, um Maßnahmen mit wissenschaftlicher Evidenz zu rechtfertigen oder weiterzuentwickeln. Politische Handlungsfelder werden mit wissenschaftlichen Methoden erforscht, um auf Veränderungen und aktuelle Ereignisse in bestimmten politischen Handlungsfeldern reagieren zu können. Diese methodischen Einblicke erlauben der Politik, Ursachen und Wirkungszusammenhänge zu verstehen, und so die Erreichung von Zielen zu optimieren.

In drei Blöcken werden die theoretischen und methodischen Grundkonzepte evidenzbasierter Politikgestaltung behandelt und eine Abgrenzung zu "normalen" sozialwissenschaftlichen Kernkonzepten vorgenommen. Die individuellen Politikfeldinteressen der TeilnehmerInnen werden berücksichtigt und Beispiele aus diesen herangezogen. Eigene Forschungsprojekte oder Ideen können vorgestellt und deren Zusammenhang mit den politischen Diskursen besprochen und (weiter-) entwickelt werden.

Themen

- Wie wird Politik gemacht? Wer definiert die Ziele der Politik? Welche Rolle spielen dabei Wissenschaft und ExpertInnen?
- Was ist "Evidenz" eigentlich und welche Rolle spielt die Information im Wettstreit mit den Interessen und Ideologien?
- Welche aktuellen Entwicklungen im Verhältnis zwischen Wissenschaft und Politik in Europa und in Österreich gibt es?

ECTS: 6

Information: Empfohlene Wahlfächer: 3.2 "Multivariate Analysemethoden", 3.5 "Inhaltsanalytische Verfahren"; Jeder Block wird einen Vorbereitungsaufwand von ca. 18 Stunden erfordern.

Cluster-Verantwortlicher: Günther Ogris, MA (SORA)
Vortragende: Elke Larcher, BA (SORA), Günther Ogris, MA (SORA)

17.-18. Jänner 2013
21. Juni 2013
6. September 2013
16.-17. Jänner 2014

5.3

Wirtschaft, Arbeit, Organisation

Ziele
- Kenntnis verschiedener Ansätze und aktueller Befunde der sozialwissenschaftlichen Forschung über Wirtschaft, Arbeit und Organisation
- Diskussion der Anwendung von qualitativen und quantitativen Methoden
- Kenntnisse über die jeweilige internationale Forschungslandschaft

Inhalt

Die Wirtschaft, wirtschaftliche Zusammenhänge und Kalküle prägen moderne Gesellschaften zentral. Arbeit dient der Existenzsicherung und ist weiterhin ein gewichtiges Medium sozialer Integration. Organisationen gestalten weite Teile des sozialen Lebens, und auch die Erwerbsarbeit wird meist in Organisationen ("Betrieben") getan. Zu den Themen "Wirtschaft", "Arbeit" und "Organisation" behandeln wir die sozialwissenschaftlichen Kernkonzepte. Aktuelle Debatten und Forschungsergebnisse werden vorgestellt und empirische Untersuchungsdesigns und Fallbeispiele diskutiert.

ECTS: 6

Information: Empfohlene Wahlfächer: 3.3 "Fallstudien", 3.6 "Analyse internationaler Datensätze"; Jeder Block wird einen Vorbereitungsaufwand von ca. 4-6 Stunden erfordern.

Cluster-Verantwortliche: PD Dr. Ursula Holtgrewe (FORBA)
Vortragende: PD Dr. Ursula Holtgrewe (FORBA), Univ.-Doz. Dr. Jörg Flecker (FORBA), Mag.a Dr.in Ingrid Mairhuber (FORBA), Dr.in Monique Ramioul (HIVA)

soQua Lehrgang 2012-2014

Zeit und Orte

Die Seminare finden generell von 9-18 Uhr in Wien statt.

Die genauen Zeiten sowie die Veranstaltungsorte zu jedem einzelnen Seminar finden sich auf der Homepage www.soqua.net

Kontakt

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A-1150 Wien

Bei Fragen zu einzelnen Seminaren können Sie sich auch an die im Programm angegebenen Seminarverantwortlichen wenden.

www.soqua.net

APPENDIX 3b
Finland

Skills Training, Finland

Eeva Sievi, University of Turku
12.4.2012

WG SKILLS - Researcher Training Gap Template

Version 3rd April 2012

- It has been recognised that a full mapping of skills training is not feasible in the allotted time nor would it be particularly informative.
- The purpose of this exercise is to give an overview of activities in your country focusing on the "big picture".
- As we agreed at the Working Group meeting on 27th March please begin by attempting to populate the R4 category and work backwards.
- Deadline for response is 17th April in order that we may discuss this at our next WG meeting scheduled for 25th April. The report will then be finalized and sent to the Steering Group for discussion at the next SGHRM meeting on 23rd May.

1. What are the national /regional strategies/initiatives for these levels (R1 to R4)?

- *It is clear from our work to date that the question is somewhat misplaced as there is no single national skills agenda for any country.*
- *This means that the responses to the Deloitte questionnaire will not provide a complete overview. For examples, there are cases where the response has been simply to state that there is no national policy in place. In reality, there are a number of agendas relating to skills for researchers driven by different stakeholders at regional and national level. First, there is broad government policy that may manifest itself through Higher Education and / or Research policy. Secondly, there is the policy set by agencies when they provide funding for skills training. This tends to concentrate at the level of doctoral studies. Thirdly, there is the approach of universities and other organisations that host researchers.*
- *It would be helpful to outline the various skills strategies at governmental funding agency and university level.*

Skills Training, Finland

Eeva Sievi, University of Turku
12.4.2012

2. Example(s) of the main initiative(s) on these particular areas (A to D)?

FINLAND	R1 First stage researcher	R2 Recognised Researcher	R3 Established Researcher	R4 Leading Researcher
Status	Employee/Grant holder	Employee/Grant holder	Employee	
Overview	• structured doctoral training with transferable /generic skills and advanced disciplinary courses • in addition, doctoral holders with employee status have access to professional development opportunities through HR • national recommendations concerning university-level graduate schools at http://www.aka.fi/Tiedostot/Tiedostot/Liitetiedostot/Doctral_Training_2012_en.pdf • example: University of Turku Graduate School (http://www.utu.fi/graduate_school/), most of the courses are provided in English ('access factor') • links to national doctoral programmes at http://www.aka.fi/en-GB/A/For-researchers/The-research-career/Graduate-schools/	• access to R1 courses • those with employee status have access to professional development opportunities through HR • NB!in most cases professional development opportunities provided via HR units are in Finnish ('access factor') • example: short introduction to the HR unit of University of Turku at http://www.utu.fi/en/staff/development/ • professional development opportunities through Research Collegia (activities mostly in English, not all universities have Research Collegia) • examples: http://www.utu.fi/sivustot/collegia/ (Univ Turku), http://www.helsinki.fi/collegium/english/about_the_collegium/index.htm (Univ Helsinki)	• Continuous professional development opportunities through HR • NB!in most cases professional development opportunities provided via HR units are in Finnish ('access factor') • professional development opportunities through Research Collegia (activities mostly in English, not all universities have Research Collegia) • examples: http://www.utu.fi/sivustot/collegia/ (Univ Turku), http://www.helsinki.fi/collegium/english/about_the_collegium/index.htm (Univ Helsinki)	• Continuous professional development opportunities through HR • NB!in most cases professional development opportunities provided via HR units are in Finnish ('access factor') • professional development opportunities through Research Collegia(activities mostly in English, not all universities have Research Collegia) • examples:http://www.utu.fi/sivustot/collegia/ (Univ Turku), http://www.helsinki.fi/collegium/english/about_the_collegium/index.htm (Univ Helsinki)
A. Research knowledge and skills	• Ethics of Academic Research (http://www.utu.fi/tutkimus/tutkijakoulu/ResearchEthics2012.html), LS, A2, S2 • Philosophy of Science (http://www.utu.fi/tutkimus/tutkijakoulu/Philosophy2012.pdf), LS, A2, S2 • 'Searching for information' (databases etc., in Finnish) • a number of substance-specific courses available, organized by local and	• Patent databases and market information sources(http://www.utu.fi/tutkimus/tutkijakoulu/PatentDatabases2012.pdf), LS, A2, S2		

	national doctoral programmes			
B. Personal effectiveness	• Life After PhD seminars (http://www.utu.fi/tutkimus/tutkijakoulu/LifeAfterPhD_S2012www.pdf), LS, A2, S2 • Academic Presentation Skills (http://www.utu.fi/tutkimus/tutkijakoulu/AcademicPresentationSkills.html), LS, A1, S2 • Academic Writing for Publication (http://www.utu.fi/tutkimus/tutkijakoulu/Academic_Writing_2012.pdf), LS, A3, S1 • 7 secrets of highly successful PhD students (http://www.utu.fi/tutkimus/tutkijakoulu/SevenSecretsSuccessfulPhDstudents.pdf), LS, A2, S2	• Being a successful Research leader (http://www.utu.fi/sivustot/collegia/news/Research_Leader.html), LS, A2, S2 • Peda-forum: the Finnish network of Expertise in University pedagogy and academic development (appendix & http://www.peda-forum.fi/index.php?10 – NB! ICED/ International Consortium for Educational Development, http://icedonline.net/) • Turbocharge your writing (appendix), LS, A2, S2		
C. Research management	• Labour Law for Research Professionals (http://www.utu.fi/tutkimus/tutkijakoulu/Labour.html – a larger course available in Finnish), LS, A2, S2	• Success in Science Leading (appendix), LS, A2, S2 • Many courses related to leadership, incl. eg. Early Support - How to Address Difficult Issues (Advice, guidance and coaching for supervisors who in accordance with the Early Support model need to address delicate issues related to work ability of an individual or a work community), LS, A2, S1 (limited for employees) • Seminars on funding opportunities, eg. INFO on EU FP 7 ERC Starting Grant and Centre of Excellence call of the Academy of Finland (http://www.utu.fi/tutkimus/tutkijakoulu/ERC_CoE_2012.pdf)		
D. Public engagement and impact of research	• Popularization of Science (in Finnish: writing popular articles about one's PhD project and publishing them at a web page 'tietysti.fi' maintained by the Academy of Finland, writing of the articles guided by the Academy's Communications Specialist) • 'Work community skills' (in Finnish)	• COLLABORATIONS: Project Management and Business Relations (see appendix), LS, A2, S2 • Lecturing (A3, S2, ES) • Correcting Exams (A3, S2, ES) • supervision, A3, S2, ES	• COLLABORATIONS: Project Management and Business Relations (see appendix), LS, A2, S2 • Lecturing (A3, S2, ES) • Correcting Exams (A3, S2, ES) • supervision, A3, S2, ES	• COLLABORATIONS: Project Management and Business Relations (see appendix), LS, A2, S2 • External Examiner (written exams) (A3, S2, ES) • External Examiner (theses) (A3, S2, ES) • supervision, A3, S2, ES

A: The knowledge, intellectual abilities and techniques to do research
B: The personal qualities and approach to be an effective researcher
C: The knowledge of the standards, requirements and professionalism to do research
D: The knowledge and skills to work with others and ensure the wider impact of research
For full details see http://www.vitae.ac.uk/researchers/428241/Researcher-Development-Framework.html

Skills Training, Finland

Eeva Sievi, University of Turku
12.4.2012

Notes on completing the template

1) As agreed at the meeting, please focus first on R4 and work backwards!

2) Give a brief description of specific courses in the template and accompany with full web references.

3) If possible please provide a measure of how widely available the course is based on:

Availability
A1 – low available at a single institution
A2 – medium available at a number of institutions
A3 – large available nationally (note that this could also be a type of course that is available nationally, e.g. in Ireland courses on research ethics are available for all PhD students in every university however the course itself is delivered locally)

Access
Is the course available to a select group (S1) of researchers or to the whole community (S2). For example, you would indicate S1 if the course is available only for doctoral candidates on a particular PhD programme.

4) Remember that "training" comes in many forms and is not confined to well-defined courses and professional accreditations. At senior level, it may come through collaborations with academics in other countries on supervision, for example. In this context it is important to recognise that there are two broad forms of skills training:

Learned Skills (LS) acquired through dedicated Teaching & Learning courses (including classroom, workshop and online)

Experiential Skills (ES) acquired through experience (e.g. teaching skills through running tutorials, supervising laboratory sessions and lecturing)

At the PhD level (R1) it would seem that skills acquisition is dominated by Learned Skills while Experiential Skills (ES) dominate for Leading Researchers (R4).

Even if you can only indicate availability and access for a few examples, this would be very helpful. Also if possible distinguish between Learned and Experiential. The emphasis in filling the table is to provide an overview of skills training in your country.

APPENDIX

Matti Lappalainen 23.6.2011
ICED-representative of Peda-forum
University of Turku
matlap@utu.fi

PEDA-FORUM – THE FINNISH NETWORK OF EXPERTISE IN UNIVERSITY PEDAGOGY AND ACADEMIC DEVELOPMENT

THE BASICS OF THE NETWORK

- **Founded** in 1994
- **Coordinated** by the University of Oulu
- **Financed:**
  - earlier: partly by Ministry of Education (projects, support for yearly organised conference).
  - University of Oulu allocates little resources for coordination
  - The future of the finance is under negotiations

- **Organisational form:** network, all universities are members and have contact persons. No individual members, no membership fee for universities

CURRENTS ACTIVITIES AND TOPICS (utilizing the template by ICED/James Wisdom)

A. Activities which has been especially successful this year
The national conference is always a big event and an important forum to meet colleagues. The start of Nordic-Baltic network for Educational Developers in a workshop in Denmark in 14th-16th June was also an important milestone for the Finnish participants (9 from four Finnish universities). Our national network (with mailing list and our journal) also managed to encourage many Finnish participants (23) to attend the ICED Conference in Barcelona.

B. A particular difficulty our network experienced this year
The finance of the network and especially the finance of the Peda-forum Journal (2 issues/year) has been a big topic. The next issue will maybe be only an online journal due to economic reasons. On the other hand: an online journal with integration to social web tools can also be an opportunity to create online debate.

C. In your national higher education context, please consider how you expect your network to develop over the next year
The organizational form of the network is under consideration. At the moment the network is quite loose and the resources for coordination are very limited. Under these circumstances even the rethinking of our organizational structure is very challenging. It might be that we have to continue with quite low profile.

D. Qualifications: *"Do the HE teachers in your country have to be qualified to teach in universities and colleges - is there a law about it? Or are lecturers and academics only encouraged to gain qualifications?"*
At the moment there is no law about this. In the future one university (University of Jyväskylä) is requiring 10 ECTS course. Some universities have own "strong recommendations" for this. However, all universities are offering courses for lecturers.

Turku Collegium for Science and Medicine (TCSM) and Turku Institute for Advanced Studies (TIAS) are arranging:

TURBOCHARGE YOUR WRITING

Seminar by Hugh Kearns (http://www.flinders.edu.au/profdev/contact/hugh-kearns.cfm)

Friday December 17 at 8.30–11.30

Mauno Koivisto Centre auditorium, BioCity, Tykistökatu 6, Turku
Coffee and sandwiches at 8.15

Would you like to know the secret to high output, low stress scholarly writing? In academia it is often assumed that writing comes naturally. However, an overwhelming body of research shows that there are very clear and practical strategies that can greatly increase your writing productivity. This workshop will help you to understand:

* why it's hard to get started
* how we deliberately use distractions to slow down writing
* the principles of quick starting
* how to deal with destructive internal beliefs
* how to set a writing plan and stick to it
* how to set achievable goals by writing in a silo
* how to greatly increase the number of actual words you produce
* how to clarify your thinking, and improve the quality of your work

The seminar is aimed at young research group leaders and young independent scientists.

Registration at http://www.utu.fi/sivustot/collegia/news/TURBOCHARGE_YOUR_WRITING.html by Friday December 10

Further information from the seminar organizers

Turku Collegium for Science and Medicine
Coordinator Satu Alanko
E-mail: satu.alanko@btk.fi
Tel +358 2 333 8042

Turku Institute for Advanced Studies
Coordinator Kimi Kärki
E-mail: kimi.karki@utu.fi
Tel. +358 2 333 5890

Turku Collegium for Science and Medicine organizes a one day course

Success in Science Leading

May 12, 2009, Harjattula

PROGRAM

11.15	**Bus leaves from Turku to Harjattula**
11.45	**Lunch**
12.45	**Jyrki Heino,** Professor, Chair of the Board for Turku Collegium for Science and Medicine: TCSM: future prospects
13.00	**Sirpa Jalkanen**, Professor, University of Turku: Career in science- a practical view
13.30	**Mark Johnson,** Professor, Åbo Akademi University: Scientific career in Finland as an expatriate
14.00	**Petriina Paturi,** Academy Research Fellow, University of Turku: Career in science- a view of a young PI
14.30	**Coffee & Tea break**
15.00	**Tiina Petänen,** Academy of Finland: Funding opportunities for young PIs in Academy of Finland
15.30	**Soile Haverinen,** University of Turku Research and Industrial Services: Practical information on applying research funding: Where to find information, how to apply?
16.00	**Paavo Okko,** Professor emeritus, Turku School of Economics: Management of science and leadership in science
16.45	**Wine & Snacks & Networking**
17.45	**Bus leaves from Harjattula to Turku**

All post docs and beginning group leaders in the field of science and medicine, WELCOME! The course is free of charge.
Please register by May 5 at www.biocity.turku.fi

COLLABORATIONS: Project Management and Business Relations

Monday September 19, 2011, Janus lecture hall, University of Turku

10:00 Opening words
Professor Marja Vauras, TIAS Director
Professor Sirpa Jalkanen, TCSM Director

10:30 Professor Niina Nummela (Department of Marketing and International Business):
Experiences and reflections on research project management and collaboration with industry

11:30-12:30 Lunch

12:30 Professor, Vice Rector Harri Lönnberg: Science push or technology pull

13:30 Director Aki Koponen (Centre for Research and Education CRE, Institute for
Competition Policy Studies): Industry collaboration – benefits and challenges for academic
Research

14:30 Get together in Janus lobby

Arranged by Turku Institute for Advanced Studies (TIAS) and Turku Collegium for Science and
Medicine (TCSM)

Registration at
http://www.webropolsurveys.com//S/1417CE4F09B3A6B2.par by Friday September 16 noon

Further information from the seminar organizers

Turku Collegium for Science and Medicine
Advanced Studies
Coordinator Satu Alanko
E-mail: satu.alanko@btk.fi
Tel +358 2 333 8042

Turku Institute for

Coordinator Kimi Kärki
E-mail: kimi.karki@utu.fi
Tel. +358 2 333 5890

APPENDIX 3c
Germany

WG SKILLS - Researcher Training Gap Template

1. What are the national /regional strategies/initiatives for these levels (R1 to R4)?

- **Background**: Germany being a federal state, in all matters of university legislation the Laender are in charge. The universities, however, have a high degree of autonomy with regard to research training. In the Joint Science Conference (GWK), the Ministers and Senators of the Federal Government and the Länder responsible for science and research meet to deal with all questions of research funding, science and research policy strategies and the science system which jointly affect the Federal Government and the Länder. Whilst preserving their own competences, the members of the GWK strive for close coordination on questions of common interest. However, so far they have not issued any common statement or developed a joint approach with regard to skills training.
- The **universities** are in charge of awarding doctoral degrees. There exist framework regulations for the doctorate at university level, but according to Länder legislation in most cases the University departments decide on the doctoral degree regulations. In November 2011, the **German Rector's Conference (HRK)** has adopted a recommendation that universities should establish and support **career services** to act as interface between universities as well as universities of applied sciences and employers and to help prepare the (BA- and MA-) students for working life outside academia. Only its secondary role is to offer continuing training also for more advanced researchers. So far 100 German universities and universities of applied sciences have similar services. According to this recommendation, the career services should offer – in addition to the offers at the disciplinary level – their own courses in "additional qualifications, social and media competencies (key competencies) and soft skills (e.g. rhetoric, presentation technique, time management, coaching for job applicants etc.)".
- In April 2012, the **HRK** published recommendations for the universities on how to **assure the quality of doctoral education**. This paper stipulates that universities offer their doctoral candidates qualification measures for acquiring "academic key competencies as well as teaching and supervisory competencies".
- Research funding organisations and research performing organisations

have their own programmes for career development. These programmes also include the provision of skills training. However, most measures are aimed at doctoral candidates; special programmes, especially including skills training, for more established/advanced researchers seem to be (still) rare. Moreover, the individual programmes differ in what they offer with regard to skills training. It is, therefore, difficult to make general remarks.

2. Can you give example(s) of the main initiative(s) on these particular areas (A to D)?

- D: There might exist some universities which offer skills training also to this target group. There is no consolidated information available. An increasing number of universities have special programmes for female scientists, including more advanced or even leading ones (f.i. University of Duisburg-Essen, ProMent, Career mentoring and coaching for newly appointed female professors, see: http://www.uni-due.de/imperia/md/content/zfh/flyer_proment.pdf, available only in German).
- C: dito. More and more universities (Karlsruhe, see example in appendix or the Science CareerNet Ruhr of the universities Bochum, Dortmund and Duisburg-Essen, http://www.scn-ruhr.de, or the University of Bremen, http://www.personalentwicklung.uni-bremen.de/Akademisches-Personalmanagement.18.0.html, both available only in German) are very active in supporting young research group leaders and offer a wide range of services, including career advise, skills training etc. All in all, it seems that the universities have recognised their responsibility for more advanced postdocs, too, and that they are in the process of building up their support structure for this target group.
  The DFG offers to researchers funded in the Emmy Noether Programme a modular training for career advancement, including courses in time and project management, personnel, finances, communication/marketing etc. The courses in the Young Leader in Sciences programme are provided by the centre for research management (Zentrum für Wissenschaftsmanagment, Speyer – http://www.zwm-speyer.de/index.php?module=010600&catalog=2&category=13&m=118, available only in German). Feed back from the researchers confirms that they consider this offer very worthwhile and benefit a lot from it.
- B: An increasing number of universities provide courses for this group. One would need to investigate this further in order to give a more comprehesive picture.
- A: Approx 20 to 30 percent of doctoral candidates now write their

disseration in a structured programme, thus benefiting from some skills training (the availablity and quality may vary and also whether participation is compulsory or not.). More and more centralized service points in universities offer skills training to PhDs (see Appendix => Graduate Academy Jena, or University Erlangen-Nürnberg, http://www.graduateschool.fau.eu/index.shtml or University of Kassel, http://cms.uni-kassel.de/unicms/index.php?id=prio_kompetenz&L=1).
It is a prerequisite of DFG funded Research Training Groups that they not only offer high qualitiy research training but supplement this by a systematic study programme. Participation is mandatory. However, what is offered is different for each RTG, they are asked to develop a concept for a tailor-made programme which fit the needs of their specific clientele.

	R1 First stage researcher	R2 Recognised Researcher	R3 Established Researcher	R4 Leading Researcher
Status	Fellowship holder / Employee	Employees		
Overview	More and more universities have introduced structured PhD programmes Availability: A1 (rarely A2) Access: S1 (sometimes S2) Besides, there are a number of well-established structured PhD programmes, like the DFG-funded Research Training Groups and Graduate Schools or the International Max Planck Research Schools A 1; S 1 All the structured programmes encompass transferable/generic skills and advanced disciplinary courses which, however, may vary from one programme to another, also depending on the disciplines and whether they receive external funding (all four domais, all 12 types of skills but in varying degree and composition)	An increasing number of universities have recognizes that younger researchers on the way to getting established can benefit from trainings in transferable skills, too.In some cases, they offer courses especially for this target group, in others they provide access to courses which originally were designed for first stage researchers. There seems to be a trend that the so-called "graduate academies" and the Graduate Schools (whether DFG-funded or not) are considered as institutions for both first stage researchers and young postdocs. However, the services and courses provided differ so that general statements are difficult to make	Continuous professional development opportunities through HR; s still small, but increasing number of universitites offer dedicated courses for this target group, especially for junior research group leaders and junior professors A 1, S 1	Continuous professional development opportunities through HR, some programmes for female R4, A 1, S 1

A. Research knowledge and skills	*every DFG-funded research training group (at the moment ca. 200); see as another example the doctoral programme of the Technical university of Munich, https://portal.mytum.de/gs/qualifizierungsprogramm/puzzleunterseiten/fachlichequali_en/.*	*LS -*	*LS -*	*LS -*
B. Personal effectiveness	*B2, ProUB, University of Bremen programme for research career development, http://www.uni-bremen.de/forschung/promovierende-post-docs/promotionszentrum-universitaet-bremen-proub/qualifizierungsprogramm/veranstaltungsbeschreibungen/veranstaltung-2012-09-pz.html*	*B 1-3, Graduate Academy, University of Heidelberg, http://www.zuv.uni-heidelberg.de/personal/entwicklung/zurprofessur/Managementprogramm.html*	*B3, plan m. mentoring in science (for female researchers who aim at becoming a professor, http://www.uni-bremen.de/chancengleichheit/plan-m-mentoring-in-science/programm.html (in German only)*	*?*
C. Research management	*C1, Free University Berlin, Dahlem Research School, http://www.fu-berlin.de/en/sites/promovieren/drs/qualification/skills/ss2012/TS-AP/RI/index.html*	*C1, Free University Berlin, Dahlem Research School, http://www.fu-berlin.de/en/sites/promovieren/drs/qualification/skills/ss2012/TS-AP/RI/index.html*	*C 3: module for research group leaders at the ZWM, http://www.zwm-speyer.de/index.php?module=010700&event=76&catalog_id=2 (only in German)*	*?*
D. Public engagement and impact of research	*D 2, University of Jena, Graduate Academy, http://www.jga.uni-jena.de/index.php?id=125&L=1tx_powermail_pi1%5Buid1%5D%3DEnglisch%20Conversation%20Workshop%20%28id%3A158%29&tx_seminars_pi1[showUid]=525*	*D 1-2, University of Bonn, http://www.gleichstellung.uni-bonn.de/foerderung/mentoring/postdoktorandinnen-habilitandinnen (only in German)*	*Teaching for university teachers in Saxony, https://www.hds.uni-leipzig.de/index.php?id=78&tx_seminars_pi1[showUid]=209 (only in German)*	*D1, Ex. Helmholtz Academy for leading personel, http://www.helmholtz.de/jobs_talente/helmholtz_akademie_fuer_fuehrungskraefte/programm_fuer_die_obere_fuehrungsebene/ (in German only)*

Appendix
Two Examples of Structured PhD Programmes and Courses

Graduate Academy of the Friedrich Schiller University Jena

1.1. CONCEPTION

The Graduate Academy was established to assure optimal conditions in research training for PhD students and Post-Docs. One step in this direction is the study programme tailored to the needs of doctoral students and Post-Docs. This study programme complements the discipline specific courses offered within the structured programmes.

Study Programme

With regard to the specifics of each discipline, the Graduate Academy has developed its own study programme. Cooperations exist with the Research and Transfer Service Centre, the university project "Teaching To Teach" and other partners. The programme consists of three pillars:

1. **Core research skills**
   - Core research theme
     - Research themes from the members
     - Basic principles of research
     - Controversies in research
     - Colloquia
   - Advanced research methods
   - Scientist in Residence
2. **Transferable skills**
   - Management & Organisation (including Teamwork)
   - Communication, Presentation and the Media
   - Career Planning
   - Gender Issues
   - Teaching Skills
3. Languages

   German as a foreign language

   English

Group leaders and lecturers can attend courses run by the German Association of University Professors and Lecturers.

Established researchers are **not** the target group of the Graduate Academy. The university of Jena has **nothing** to offer them but refers them instead to the Deutsche Hochschullehrerverband.

1.2. STUDY PROGRAMME SUMMER 2012

Research Methodology	>> Info/Registration
Date	**Course**
12.-13.04.2012	Working with MATLAB – an Introduction
18.04.-27.06.2012 (weekly)	Neighborhood Properties of Geometric Sets and Applications
25.04.2012	Literaturverwaltung und Wissensmanagement mit CITAVI
27.04.2012	Understanding Statistics - The Basics
02.05.-20.06.2012 (on Wednesdays)/postponed	Advanced Research Methodology I
05.06.2012	Literaturverwaltung und Wissensmanagement mit CITAVI
22.06.2012	Advanced Data Analysis with IBM Statistics 20 - What´s new?
02.07.2012	Visualizing your Data - Convincing with professional posters and presentations

Transferable Skills/Teaching Skills	>> Info/Registration
Date	**Course**
26.09.2011-31.08.2012	Zertifikatsprogramm Lehrqualifikation Basic
02.04.2012-31.03.2013	Zertifikatsprogramm Lehrqualifikation Basic
23.-24.04.2012	Extramural Funding: Key Factors for Writing a Successful Proposal
02.05.-13.06.2012 (on Wednesdays)	Scientific Writing and Publishing for Natural Scientists
03.-04.05.2012	Good scientific practice und how to deal with conflicts in research eenvironments
07.-08.05.2012	Planning and facilitating effective workshops
10.-11.05.2012	Leadership Skills
21.-22.05.2012	Self-marketing for women – necessary? allowed?
04. und 11.06.2012	Writing for doctoral candidates in the humanities ans solical sciences (coaching)
07.-08.06.2012	Time and project management
14.06.2012	Scientific Presentations
15.06.2012	Scientific Presentations
18.06.2012	Intercultural Workshop
06.-06.07.2012	Efficient reading
09.-10.07.2012	Speech and Vocal Training
20.-21.07.2012	Speech and Vocal Training

Languages	>> Info/Registration
Date	**Course**
16.04.-20.07.2012	German for Beginners (A1)
18.-20.04.2012/postponed	English Grammar and Pronunciation

20.-22.06.2012	English Conversation Workshop
11.-13.07.2012	English Conversation Workshop

1.3. TEACHING QUALIFICATION

At the Graduate Academy, qualification in academic teaching is regarded as an important part of the study programme. The qualification is deemed relevant for the employability of academics in- and outside the university. During the course of your doctorate you will need this qualification in several areas, e.g. doctoral candidates are confronted with planning and giving courses for undergraduate students, instructing research students and interns and supervising exam projects. The Graduate Academy supports its members in acquiring the necessary qualifications.
According to individual requirements you can choose between three options.
All participants will receive a certificate "Qualification in academic teaching" by the Graduate Academy upon successful completion of the programme.

A) „Basic qualification in teaching"

One-year programme consisting of workshops, including video-recording and subsequent evaluation of your own teaching performance

Run by the university project "LehreLernen" (Learn to Teach)

Individual registration

B) „Coaching in Teaching - Basics in academic teaching"

Half-yearly programme consisting of seminars and feedback on your own teaching

Run by ORBIT e.V.

Registration of groups by the coordinators of the Graduate Schools, Research Training Groups and Graduate Programmes

Please contact Dr. Gunda Huskobla if you are interested in this programme

Options in English available

C) „Compact Course Academic Teaching"

Three thematic workshops based on each other in the three domains planning, running of courses as well as evaluation and assessment

Run by the university project "LehreLernen" (Learn to Teach)

Individual registration

Certificate

The GA issues a certificate upon successful participation in the workshops with a supplement to information on the course content. Participants who were absent for more than 20% of the time do not receive a certificate. Likewise, participants who have not paid the service charge will not receive a certificate.

- not obligatory
- the courses are not for free, but the fees are rather low

1.4. THE GRADUATE ACADEMY ENCOMPASSES A CENTRE FOR ADVANCED METHODS TRAINING

systematically surveys the requirements
for specific and cross-disciplinarily general methods-training,

identifies the best experts as trainers,
within the university or throughout the international scientific community

tailors a support programme to Your needs,
ranging from seminars and workshops to consultations and coaching

ensures the quality management by process evaluation
of the workshops

It is our mission to identify your requirements of consulting and training service,
spot first-class experts, and bridge the gap to supply a state-of-the-art training.
The service offer is targeted at doctoral candidates and postDocs as well as their supervisors,
senior researchers and programme coordinators.

2nd example: International Graduate Academy, University of Freiburg

The IGA is the central service department of the University of Freiburg for all questions concerning doctoral studies.

It offers the university's doctoral candidates **the following services**:

- A **transdisciplinary qualification program** with an average of 70 courses and workshops per year in the areas management and communication, media and data processing, languages, higher education teaching methodology, career planning and career entry, and practical orientation. Approximately 1/5 of the university's doctoral candidates have taken advantage of the course program to date and have given the courses an average grade of 1.4 in course evaluations!
- Individual career advising and support in applying for scholarships, publication subsidies, and research-related travel costs. Last semester, our academic coordinators advised a total of 150 doctoral candidates.
- Individual coaching. Last year almost 50 early stage researchers profited from this service.

The IGA offers also entrepreneurship advising.

The IGA offers the following services especially for international PhD students:

- individual advising and support in organizational matters,
- a proofreading service for academic texts,

- the postgraduate conference „Milestones."

- The International Graduate Academy (IGA) offers 35 to 40 courses and workshops per semester in German and English to provide doctoral candidates **transdisciplinary further qualifications. The courses teach core competencies and transferable skills in six areas**: Management and Communication, Media and Data Processing, Career Planning and Career Entry, Higher Education Teaching and Learning, Practical Orientation, and Languages.

- These courses are **open to all doctoral candidates at the university** and are free of charge for students planning to earn their doctorate in Freiburg. [i.e. not compulsory!]

- The transdisciplinary course program is designed for all doctoral candidates of the University of Freiburg. You may participate in the courses if you are registered or matriculated as a doctoral candidate at the University of Freiburg. Visiting doctoral candidates who are not participating in a structured program within one of the University of Freiburg's graduate schools or doctoral research groups and are not matriculated must receive special permission before being allowed to participate in the qualification program

- All IGA courses begin promptly at the time indicated in the course catalog (i.e., sine tempore); punctuality is expected. Teachers are authorized to exclude participants from their courses who do not cooperate sufficiently. Participants may also be excluded for passing on confidential information from the courses to the public or for other inappropriate behavior.

Course program:

- Management and Communication. The area „Management and Communication" includes courses on presentation techniques, design, and writing skills to help students make more effective presentations on topics from their dissertation at conferences and colloquia. Other workshops teach rhetorical and general communication skills, providing students with important transferable skills in areas like time and self management, moderation, and leadership.

- Media and Data Processing. The courses in the area „Media and Data Processing" train media skills and teach students to use various computer programs which can be helpful for preparing presentations, writing academic texts, or typesetting a dissertation or other text for publication.

- Career Planning and Career Entry. The courses in the area „Career Planning and Career Entry" support students in evaluating their career options and planning their career and provide concrete preparation for job interviews. In addition, this area includes courses in which professionals provide an introduction to their own field of work, thus providing students practical insight into professions they are interested in and enabling them to establish contact with experts from the private sector.

- Higher Education Teaching and Learning. The area „Higher Education Teaching and Learning" includes important skills and qualifications for students interested in becoming professional educators. These courses are designed especially for doctoral candidates who are teaching courses at the university and wish to learn the skills

necessary for effective teaching and pedagogical reflection or who are looking for support on methodological questions.

- Practical Orientation. The goal of the courses in the area „Practical Orientation" is to help students prepare to write their dissertation, support them in the various phases of their studies, and provide tips on how to establish optimal conditions for effective studying.
- Language Courses. The courses in „Languages" help students to extend their oral and written expressiveness and discussion skills, particularly in foreign languages. In order to support the integration of international students of the university, the IGA offers an average of 3 to 4 courses per semester in German as a foreign language.
- Advising. The area "Advising" includes individual advising sessions on the topics "Career and Profession" and "Academic Writing." The individual "Career Advising" serves to make advisees aware of their career potentials and help them develop efficient strategies for career entry. The "Writing Advice" sessions, which offer an initiating, non-directive form of advising, enable the advisee to reflect on the process and outcome of text production and discuss possibilities for their optimization. A routine consideration of one's own writing process is also possible in the "Autonomous Writing Group."
- Coaching. The area „Coaching" includes workshops in which small groups of participants learn methods for advising each other and providing each other feedback and support in decision making. Coaching is a solution-oriented approach based on mutual trust and respect among group members. In supporting each other the participants develop efficient strategies for coping with the various demands of the doctoral phase.

One Example of a programme for young research group leaders

Young Investigator Network (YIN) at the Karlsruhe Institute of Technology[11]

Established in spring 2008, the Young Investigator Network (YIN) offers a platform and a democratic representation of interests for the junior research leaders at KIT. The main tasks of YIN are:

- representation of interests and networking of its members
- advancing leadership skills and personal qualifications.

The network is self-governing. Until now, it is unique in this form in Germany. YIN is a key element in the Concept for the Future of KIT. Financial support is

[11] Compare also the House of Competence, a central institution of KIT which connects the various, previously co-existing central and decentralized institutions which convey competence in teaching and further training. (www.hoc.kit.edu). The HoC programmes is geared mostly to students.

provided through funds of the Excellence Initiative and Administrative Assistance by the Karlsruhe House of Young Scientists (KHYS) and the KIT Research Office

A **wide-ranging advanced training program** is offered to network members **to assist them in their further qualifications as leaders in research and teaching or in the industry**. This includes tailor-made leadership workshops and didactic courses as well as an extensive coaching and mentoring program that have been developed especially for the YIN members in cooperation with the Scientific Further Education Department (PEW) at the KIT.

For further info see http://www.yin.kit.edu/english/1117.php

APPENDIX 3d
Ireland

WG SKILLS - Researcher Training Gap Template

Version 3rd April 2012

- It has been recognised that a full mapping of skills training is not feasible in the allotted time nor would it be particularly informative.
- The purpose of this exercise is to give an overview of activities in your country focusing on the "big picture".
- As we agreed at the Working Group meeting on 27th March please begin by attempting to populate the R4 category and work backwards.
- Deadline for response is 17th April in order that we may discuss this at our next WG meeting scheduled for 25th April. The report will then be finalized and sent to the Steering Group for discussion at the next SGHRM meeting on 23rd May.

1. What are the national /regional strategies/initiatives for these levels (R1 to R4)?

- *It is clear from our work to date that the question is somewhat misplaced as there is no single national skills agenda for any country.*
- *This means that the responses to the Deloitte questionnaire will not provide a complete overview. For examples, there are cases where the response has been simply to state that there is no national policy in place. In reality, there are a number of agendas relating to skills for researchers driven by different stakeholders at regional and national level. First, there is broad government policy that may manifest itself through Higher Education and / or Research policy. Secondly, there is the policy set by agencies when they provide funding for skills training. This tends to concentrate at the level of doctoral studies. Thirdly, there is the approach of universities and other organisations that host researchers.*
- *It would be helpful to outline the various skills strategies at governmental, funding agency and university level.*

2. Can you give example(s) of the main initiative(s) on these particular areas (A to D)? **IRELAND**

- *We have agreed to use the matrix spanned by the European Framework for Research Careers (EFRC) and the Researcher Development Framework (RDF) as the template for investigating skills provision. The EFRC is now an accepted European classification. The RDF, developed by VITAE in the UK, has been piloted in a number of countries through the European Science Foundation (ESF) and is seen to have worked well.*

- *This is not intended to be a full mapping exercise. The objective is to provide as many examples as possible for the template in order to gain an overall impression of skills training.*

- *The table is filled with examples from Ireland and while not being complete does give an overall impression of skills training (the full template completed before last WG meeting on 27th March is appended).*

	R1 First stage researcher	R2 Recognised Researcher	R3 Established Researcher	R4 Leading Researcher
Status	Student / Employee	Employees		
Overview	Completely restructured PhD with transferable/generic skills and advanced disciplinary courses	Many will access the R1 courses but also have access to continuous professional development opportunities through HR	Continuous professional development opportunities through HR	Continuous professional development opportunities through HR
A. Research knowledge and skills	*Graduate Certificate in Innovation and Entrepreneurship, TCD-UCD Innovation Academy (LS, A2, S1)* *GS505 Graduate Research Skills, NUI Galway (LS, A1, S2)* *'I'm nearly finished' - exploring the personal writing challenges and breakthroughs associated with completing a PhD (NAIRTL)*[12] *(LS, A3, S2)*			
B. Personal effectiveness	*Graduate Certificate in Innovation and Entrepreneurship, TCD-UCD Innovation Academy (LS, A2, S1)* *GS510 Publishing Research & Preparing for the Job Market, NUI Galway (LS, A1, S2)* *GSS3 Thesis Completion and Career Development, NUI Maynooth (LS, A1, S2)*	*Networking both internally and externally, UCD (LS, A1, S2)*	*Networking both internally and externally, UCD (LS, A1, S2)*	
C. Research management		*Project Management in the Research Context, UCD (LS, A1, S2)* *Project Management for Researchers, UCD (LS, A1, S2)*	*Project Management in the Research Context, UCD (LS, A1, S2)* *Project Management for Researchers, UCD (LS, A1, S2)*	
D. Public engagement and impact of research	*GS512 Engaging with the community: research, practice and reflection, NUI Galway (LS, A1, S2)* *Giving Tutorials (A3, S2, ES)* *Laboratory Supervision (A3, S2, ES)* *Exam Invigilation (A3, S2, ES)*	*Grant Writing, DCU (LS, A1, S2)* *Pitching your Research to increase Funding Opportunities, DCU (LS, A1, S2)* *Lecturing (A3, S2, ES)*	*Grant Writing, DCU (LS, A1, S2)* *Pitching your Research to increase Funding Opportunities, DCU (LS, A1, S2)* *Lecturing (A3, S2, ES)*	*External Examiner (written exams) (A3, S2, ES)* *External Examiner (theses) (A3, S2, ES)*

[12] http://www.nairtl.ie/index.php?pageID=27&eventID=419

		Correcting Exams (A3, S2, ES)	*Preparing & Correcting Exams (A3, S2, ES)*	

A: The knowledge, intellectual abilities and techniques to do research
B: The personal qualities and approach to be an effective researcher
C: The knowledge of the standards, requirements and professionalism to do research
D: The knowledge and skills to work with others and ensure the wider impact of research
For full details see http://www.vitae.ac.uk/researchers/428241/Researcher-Development-Framework.html

Notes on completing the template
1) As agreed at the meeting, please focus first on R4 and work backwards!

2) Give a brief description of specific courses in the template and accompany with full web references.

3) If possible please provide a measure of how widely available the course is based on:

Availability
A1 – low available at a single institution
A2 – medium available at a number of institutions
A3 – large available nationally (note that this could also be a type of course that is available nationally, e.g. in Ireland courses on research ethics are available for all PhD students in every university however the course itself is delivered locally)

Access
Is the course available to a select group (S1) of researchers or to the whole community (S2). For example, you would indicate S1 if the course is available only for doctoral candidates on a particular PhD programme.

4) Remember that "training" comes in many forms and is not confined to well-defined courses and professional accreditations. At senior level, it may come through collaborations with academics in other countries on supervision, for example. In this context it is important to recognise that there are two broad forms of skills training:

- ***Learned Skills (LS)*** acquired through dedicated Teaching & Learning courses (including classroom, workshop and online)
- ***Experiential Skills (ES)*** acquired through experience (e.g. teaching skills through running tutorials, supervising laboratory sessions and lecturing)

At the PhD level (R1) it would seem that skills acquisition is dominated by Learned Skills while Experiential Skills (ES) dominate for Leading Researchers (R4).

Even if you can only indicate availability and access for a few examples, this would be very helpful. Also if possible distinguish between Learned and Experiential. The emphasis in filling the table is to provide an overview of skills training in your country.

APPENDIX

IRELAND
Version completed 23rd March 2012 and discussed at WG Skills meeting on 27th March

IRELAND
Version completed 23rd March 2012

1. What are the national /regional strategies/initiatives for these levels (R1 to R4)?

There are a number of policy approaches in Ireland, led by the key stakeholders, government, funding agencies and universities. There is no single skills policy for all four categories. One can clearly identify strategies for PhD candidates (R1) as a distinct grouping from the other three. The R2 has some overlap with R1 in terms of skills but R3 and R4 are completely separate.

The section below provides an overview of skills provided for the four categories of researchers.

R1 Doctoral Training
In Ireland, one can identify two approaches to doctoral education, that of the government and of the universities.

Government
There are two national policy documents that set out the approach to the education and training of PhD students. The first is the Strategy for Science Technology and Innovation (SSTI). This was published in 2006 and laid out a national investment strategy for doubling the number of PhD graduates by 2013.

The *SSTI* target of doubling the number of PhDs in higher education involves collaboration between a number of Higher Education groups including the Deans of Graduate Studies, higher education organisations, employers in industry and the government. Agencies which have increased investment in "Fourth Level Ireland" (PhD + early postdoc) include the Higher Education Authority (HEA) through the Programme for Research in Third Level Institutes (PRTLI), the Strategic Innovation Fund (SIF) and Graduate Research Education Programmes (GREPs), the Health Research Board (HRB) and Science Foundation Ireland (SFI). Having developed structured PhD programmes, these agencies have a vested interest in their successful implementation.

Funding for structured PhD's is provide through a number of national programmes. The main one is the Programme for Research in Third Level Institutions (PRTLI). The principal feature of this scheme is its collaborative nature. The various PhD programmes are thematically based and bring together universities, institutes of technology and research centres. Some have industry and / or hospitals as partners.

The economic situation has changed since SSTI was launched in 2006 and the ability for the Irish government to support a full bottom up approach to research investment is no longer feasible. Resources must be carefully targeted to ensure maximum benefit for the Irish economy and society. On 1st March, the Minister for Enterprise Jobs and Innovation unveiled a new plan for public investment in research through the report of the Research Prioritisation Group. The recommendations in this

report build on the strengths developed through previous investments and identify target areas of opportunity. This will be done on a five-year timescale that concentrates on areas that are of clear economic interest to Ireland[13]. The report recognizes the importance of researchers and in particular the PhD. It has two relevant recommendations:

"A consistent quality framework should be developed for postgraduate education and training incorporating the Structured PhD model. Responsibility for monitoring of the output and quality of Masters and PhD training and education should rest with the Department of Education and Skills (DES). Indicators of the quality of postgraduate education and training should be developed by DES and integrated into the Government's overall framework for monitoring science, technology and innovation.

Initiatives to improve further and keep under continuous review the alignment between the supply of trained researchers from academia and the demand for such skills from the enterprise sector are imperative:

- *A proportion of PhD funding should be earmarked to support the development and rollout of the industrial PhD model in Ireland.*
- *A proportion of PhD funding should be redirected towards the development of industry driven Masters programmes.*
- *Technology Transfer Offices within the HEIs should develop a coherent and integrated programme of support for PhD students and early stage post- doctoral researchers that enables them to identify and exploit commercial opportunities arising from their research".*

A new completely separate announcement is imminent that will bring together the two research councils (IRCSET and IRCHSS)[14] to form a single council, the Irish Research Council (IRC). The focus of this council will be the funding of PhD and early stage postdoctoral researchers. It will continue the work of the two previous councils that focused on structured PhD's and researcher career development.

It is clear that the government is committed to the funding of structured PhD's as the best method for the training of doctoral candidates. The new aspect that will be introduced is a major collaboration with the private sector, expanding the current industry PhD.

Universities

Led by the IUA and the universities have restructured PhD education in Ireland. There is now a much more structured approach to graduate studies and research in universities and other higher education institutes. The original proposal was published by the Irish Universities Association (2005) to reform the "Third and Fourth Level" education in Ireland were:

- At Third Level, a radically improved system to support the fundamental changes required to ensure graduates are equipped for a lifetime of innovation and change in the workplace and further learning at Fourth Level (PhD + early postdoc);

[13] There are 14 specific areas including, Connected Health and Independent Living; Medical Devices; Security and Privacy; Digital Platforms; Marine Renewable Energy; Smart Grids and Smart Cities

[14] IRCSET – Irish Research Council for Science Engineering and Technology (www.ircset.ie)
IRCHSS – Irish Research Council for Humanities and Social Sciences (www.irchss.ie)

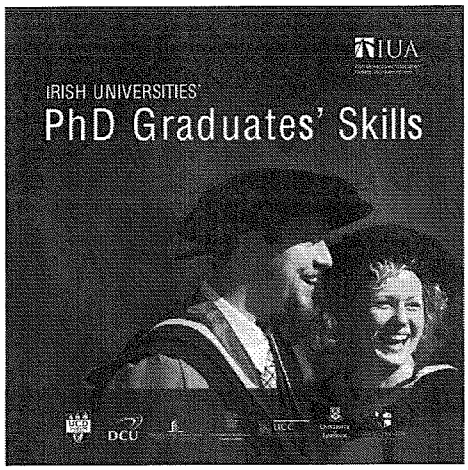
- At Fourth Level (PhD + early postdoc), a dramatic improvement of performance in research and the output of highly-skilled graduates with doctoral qualifications and post-doctoral experience.

Reflecting the need to accommodate support and development opportunities to meet the needs of an employment market wider than academia, furnish places for an expansion in doctoral candidates, and maintain quality, the Irish Universities Association (IUA) asserted in 2005 that:

The current training structures and systems of the universities cannot deliver the required increase in numbers while simultaneously maintaining quality. A substantially modernised system is required to deliver the types of Masters and PhD graduates that are fully skilled to engage in the knowledge society (IUA, 2005: 15).

It was envisaged that the modernised system would include the universal enrolment of PhD candidates on structured programmes. As part of the development Deans of Graduate Studies authored the IUA *PhD Graduates' Skills Statement*, which outlines the competencies, attributes and qualities a PhD graduate should ideally possess following a PhD and acts as a communication document to potential employers. The statement is also considered an aid to those developing and designing structured programmes.[15]

Structured PhD programmes in the universities provide a framework in which students have optimal opportunity to develop these competencies, attributes and qualities. Skills for PhD students such as research skills and awareness, ethics and social understanding, communication skills, personal effectiveness/development, team-working, leadership, career management, entrepreneurship and innovation are included in the *Graduate Skills Statement*. The majority of these competencies are developed through the conduct of research, embodied in the PhD thesis, the quality of which remains the basis for the award of a PhD.[16]



In 2005, the Irish Universities Quality Board (IUQB) published *National Guidelines of Good Practice in the Organisation of PhD Programmes in Irish Universities* to support the development of new structures, policies, guidelines and procedures to assist

[15] In April 2009, the IUA released the contextual statement regarding structured PhD programmes (IUA 2009).
[16] The PhD is placed at level 10 on the National Framework of Qualifications.

doctorate students in Irish Universities and Institutes of Technology. The IUQB, working with the aforementioned Network, revised the guidelines in 2009 reflecting the increasing number of structured doctoral programmes. The 2009 guidelines state that the main characteristics of the structured PhD programme are specified programmes of education and training "*determined institutionally and at levels of facilities and disciplines*", however each student follows a unique programme (IUQB, 2009: 8). These programmes may be provided within one or more institutions.

In 2009, the IUA released a contextual statement regarding structured PhD programmes. The statement defines the core component of a structured PhD programme as:

> *The advancement of knowledge through original research. The goal of such a programme is to provide a high quality research experience and output, with integrated support for professional development. The structured PhD programme is therefore designed to meet the needs of an employment market that is wider than academia, through the introduction of a range of educational and training opportunities as part of the programme. In doing so, the structured PhD can better address the immediate research needs of students, as well as preparing them for future careers in a wide variety of contexts.*

- Enhanced arrangements for supervision and mentorship
- Structured arrangements for the development of generic and transferable skills
- Advanced taught courses in their discipline
- Regular monitoring of progress (IUA, 2009).

Across the seven universities there is now a large number of structured PhD programmes all within a common template. One key feature of collaboration has been the development of ECTS for skills training. This allows students move seamlessly between universities for specific courses and carry their credits.

A typical example of such a programme is **BioAT**, Bioanalysis & Therapeutics. This Structured PhD Programme (BioAT) is a joint initiative being undertaken by Dublin City University, the Royal College of Surgeons in Ireland, National University of Ireland, Maynooth and Institute of Technology, Tallaght to address the challenge of increasing the quality, quantity and entrepreneurial skills of Ireland's graduate researchers in the critical areas of the biopharmaceutical and biomedical device industries.

BioAT offers students a unique training and educational experience in basic and applied research, advanced technologies, and collaborative clinician-scientist research in hospital-based laboratories (Beaumont and Connolly Hospitals, and the Children's Research Centre at Crumlin Hospital). This integrated approach to advancing the understanding, diagnosis and treatment of specific diseases (cancer, neurological, cardiovascular, respiratory and infection/immune diseases) with

significant potential for commercialisation is a major strength of the programme. During their PhD students will have the opportunity for placements in international pharma companies and universities (e.g. Harvard Medical School)

R2 / R3 Recognised and Established Researchers

All researchers beyond the PhD are employees whether on fixed term or permanent contracts. As such they have access to continuous professional development (CPD) organized by the institution's human resources. Many early postdoctoral researchers (R2) would access the skills training offered to PhD students. Some Irish Higher Education Institutes have in place specific CPD schemes for researchers, for example, Dublin City University has the "Researcher Continuous Professional Development" scheme.

The National Academy for Integration of Research Teaching and Learning (NAIRTL, www.nairtl.ie) is a collaboration between University College Cork, Cork Institute of Technology, National University of Ireland Galway, Trinity College Dublin and Waterford Institute of Technology. NAIRTL is a centre of excellence for professional academic development in higher education institutions, targeted at the integration of research and teaching and learning, to support the enhancement of the student experience. It plays a key role in establishing best practice and in developing a cohort of academic staff with the requisite skills to deliver structured PhD's. A typical course delivered by NAIRTL would be on mentoring and supervision of PhD students.

While NAIRTL operates at a national level each university has its own internal structures. For example, in Trinity College Dublin, there is the Centre for Academic Practice and eLearning (CAPSL).

CAPSL offers a number of programmes for professional development and support, including workshops and seminars on various aspects of learning and teaching. Programmes range from short workshops to a new Masters Degree in Education in Learning and Teaching. CAPSL promotes e-Learning by supporting the academic community in developing their knowledge and skills in the use of new technologies. Blackboard/WebCT is the College Virtual Learning Environment which offers lecturers a cohort of tools to design and develop courses on-line.

The Dublin Regional Higher Education Alliance brings together all of the third level institutions in the Dublin area. It pools efforts in the development and delivery of structured training for PhD's.

At the level of **R3**, one will have acquired a significant number of skills, both generic and disciplinary. At this level the typical type of skills offered come through fellowships to enable researchers specialise. A good example is the Health Research Board (HRB) fellowship in translational medicine (see box). The purpose of this fellowship is to enable Clinicians with more than 3 years post-doctoral experience (e.g. doctors, dentists, nurses and other health care professionals) move into the area of translational medicine.

Post-doctoral Research Fellowships in Translational Medicine - Bench to bedside and bedside to bench

Translational medicine is an emerging field which focuses on using what is learned in pre-clinical studies to do smarter things in the clinic ('bench to bedside'). Translational medicine also uses information from clinical studies to sharpen and improve what is done in pre-clinical efforts ('bedside to bench'). It encompasses activities in prevention, diagnosis, prognosis and treatment. Translational medicine bridges applied biomedical research and clinical science with the aim of bringing new discoveries to patients and the population.

R4 Leading Researchers

Almost all of the leading researchers in Ireland are based in the universities and employed as academics (lecturers / professors). As employees they have full access to continuous professional development (cpd) opportunities. At this level the typical type of skills that they might access would relate to senior management (running a university department or becoming a faculty dean).

2. Can you give example(s) of the main intiative (s) on these particular areas (A to D)? **IRELAND**

I have added what I think is useful information to the table.

	R1 First stage researcher	R2 Recognised Researcher	R3 Established Researcher	R4 Leading Researcher
Status	Student / Employee	Employees		
Overview	Completely restructured PhD with transferable/generic skills and advanced disciplinary courses	Many will access the R1 courses but also have access to continuous professional development opportunities through HR	Continuous professional development opportunities through HR	Continuous professional development opportunities through HR
A. Research knowledge and skills	*Graduate Certificate in Innovation and Entrepreneurship, TCD-UCD Innovation Academy* *GS505 Graduate Research Skills, NUI Galway* *'I'm nearly finished' - exploring the personal writing challenges and breakthroughs associated with completing a PhD (NAIRTL)*[17]			
B. Personal effectiveness	*Graduate Certificate in Innovation and Entrepreneurship, TCD-UCD Innovation Academy* *GS510 Publishing Research & Preparing for the Job Market, NUI Galway* *GSS3 Thesis Completion and Career Development, NUI Maynooth*	*Networking both internally and externally, UCD*	*Networking both internally and externally, UCD*	
C. Research management		*Project Management in the Research Context, UCD* *Project Management for Researchers, UCD*	*Project Management in the Research Context, UCD* *Project Management for Researchers, UCD*	
D. Public engagement and impact of research	*GS512 Engaging with the community: research, practice and reflection, NUI Galway*	*Grant Writing, DCU* *Pitching your Research to increase Funding Opportunities, DCU*	*Grant Writing, DCU* *Pitching your Research to increase Funding Opportunities, DCU*	

A: The knowledge, intellectual abitilities and techniques to do research
B: The personal qualities and approach to be an effective researcher

[17] http://www.nairtl.ie/index.php?pageID=27&eventID=419

C: The knowledge of the standards, requirements and professionalism to do research
D: The knowledge and skills to work with others and ensure the wider impact of research

There is a challenge in completing a table of this type. The first is that, in Ireland, there is no single national initiative for skills training. It is done by single institutions and through collaborative ventures (see examples in previous section). In addition, some of the courses given cover more than one of the four areas.

Let me give a concrete example. The Innovation Academy is a joint venture between University College Dublin (UCD) and Trinity College Dublin (TCD) with the aim of transforming PhD students into entrepreneurs. They offer a *Graduate Certificate in Innovation and Entrepreneurship* available both as an integral part of the doctoral degree and as a stand-alone programme. The two modules within this programme are Creative Thinking & Innovation[18] and Opportunity Generation & Recognition[19].

I have also included specific examples of courses offered as part of the structured PhD in NUI Galway and NUI Maynooth. Of course similar courses exist in all of the universities but it is worth showing some specific examples.

At R2 / R3 level, I give some examples of courses for researcher career development provided by University College Dublin (UCD) and Dublin City University (DCU). It is worth noting that the development courses for researchers at this level are for single universities only.

[18] *http://www.innovationacademy.ie/storage/documents/MODULE%20DESCRIPTOR%201.pdf*
[19] *http://www.innovationacademy.ie/storage/documents/MODULE%20DESCRIPTOR%202.pdf*

APPENDIX

Examples of Structured PhD Programmes and Courses

Bioanalysis & Therapeutics (BioAT)

A Unique PhD Scholars' Programme in BioAnalysis & Therapeutics (BioAT)

This collaborative inter-institutional 4-year structured PhD programme is funded by the HEA under Cycle 5 of the Programme for Research in Third-Level Institutions (PRTLI). The programme brings together the complementary expertise of researchers from Dublin City University, the Royal College of Surgeons in Ireland, National University of Ireland, Maynooth and Institute of Technology, Tallaght.

BioAT is an integrated, flexible and student-centric programme which will enable students to broaden their skills base and career opportunities through participation in high quality research, advanced training, personal and professional development, and exposure to an innovative, translational research environment.

Research projects underpinning Bio-AT training will lead to developments in **bioanalytical methodology and technology** applied to disease diagnosis and treatment. Furthermore, they will have significant potential for commercialisation.

Research opportunities related to the following areas are available:

- Cardiovascular disease
- Infection & Inflammatory disease
- Neurological disease
- Cancer
- Regenerative medicine
- Metabolic disease
- Diagnostics
- Bio-Photonics & Imaging
- Medicinal Chemistry
- Nano-Bioanalytics
- Biosensors
- Biomedical devices

BioAT will award 29 scholarships in 2011 based across the partner institutes. We are currently accepting applications from students with genuine interest and commitment to performing innovative translational research. Full details of how to apply can be found below.

Objectives of BioAT

The overall objective of BioAT is to train and develop the participating students to become world-class researchers with the leadership and innovation skills required to underpin the continued growth and sustainability of these industries in Ireland. The specific objectives are:

- To **establish an innovative inter-institutional model of structured PhD training**

- To **provide a personalised PhD programme**, designed to optimally enhance graduate training with specific emphasis on transferable and research-focused competencies of direct relevance to the career destination of Bio-AT graduates, including academia, industry and the clinical environment.

- To deliver **collaborative multi-disciplinary PhD projects** across the consortium in Target Identification, BioAnalysis, Therapeutics, Diagnostics, Drug design which have specific translational applications in areas such as cancer, neurological, cardiovascular, respiratory & infection/immune diseases.

- To **deliver cross-institutional PhD projects** across the partners that will be **uniquely enhanced through engagement with industry & clinicians**, made possible by the partnership.

Features of the BioAT Programme

- Access to relevant taught modules across all partner institutions
- 3 laboratory rotations across the partner institutions
- Choice of inter-institutional PhD projects from an extensive range
- Training in cutting-edge technologies
- Supervision by internationally renowned researchers
- Personalised professional development programme
- Travel to international laboratories and conferences
- Emphasis on translational research with clinicians and industry
- Annual stipend €16,000 plus fees (at EU level), travel allowance and laptop

National Academy for Integration of Research Teaching and Learning (NAIRTL)

The National Academy works with Irish higher education institutions to develop and implement policy and practices aimed at enhancing the student learning experience at both undergraduate and graduate level. The Academy supports institutions through investigation and dissemination of national and international examples and models of good practice.

The National Academy's mission is:

- To enhance higher education in Ireland by working in collaboration with institutions to promote innovation, support development and sustain good practice in the integration of research and teaching and learning.
- To build capacity of academic staff and graduate students that will contribute to an innovative work force.
- To provide an efficient, cost effective and quality service to the Irish Higher Education sector.
- To promote a greater awareness of the forms of integration of research, teaching and learning and to encourage all:

Research-led teaching and learning: The curriculum is informed by the research interests of academic staff. Teaching emphasises the understanding of research findings. Research findings are used to inform the curriculum.

Research-oriented teaching and learning: The curriculum emphasises the processes by which knowledge is produced in the field as much as on learning the content of a subject. Teaching focuses on enquiry skills and on acquiring a 'research ethos'.

Research-based teaching and learning: The curriculum contains many activities in which students actually conduct research e.g. enquiry based projects. These activities are based on authentic processes of enquiry and are connected to the research of the institute.

Research-informed teaching and learning: The curriculum is informed by a systematic enquiry into the teaching and learning process itself. The 'scholarship of teaching' approach relates to teachers who are actively involved in evidence-based efforts to establish the effects and effectiveness of student learning, teaching and academic practice.

Dublin Region Higher Education Alliance (DRHEA)

The Dublin Region Higher Education Alliance (DRHEA) is a strategic alliance of the Higher Education sector in the wider Dublin city-region. It includes four Universities and their linked Colleges (TCD , UCD , DCU and NUIM) and four Institutes of Technology (DIT , IADT , ITB and ITT Dublin). The DRHEA has identified four strands where institutions can work collaboratively to increase efficiencies and enhance academic development-:

- Enhancement of Learning
- Graduate Education
- Internationalisation
- Widening Participation

Access to DRHEA academic development are availble to Trinity academic community, For more information on stands and activies click on http://www.drhea.ie

DRHEA projects within Trinity College: The Trinity Inclusive Curriculum Project

Dublin Centre for Academic Development (DCAD)

The Dublin Centre for Academic Development (DCAD), the focal point for the DRHEA's Enhancement of Learning strand, will create a 'virtual' Centre that will capitalise on expertise in educational practice, pedagogy and training in the individual institutions, and will provide access to tailored, structured programmes of training, development and support for academics in a cost-effective and collaborative manner.

The DCAD will prioritise the development of a professional development framework, underpinned by an agreed set of core values that will act as benchmarks for excellence for learning, teaching and assessment across the Dublin region and more generally across Irish higher education.

Key Objectives

- Establish a fellowship programme to develop academic leadership and drive academic change across the DRHEA and to improve practice through collaborative activity around priority areas
- Develop a shared accredited training programme for academic staff and tutors which will rationalise teacher training across the DRHEA and build on existing training and educational strengths in partner institutions
- Set up a database of shared expertise and identify multidisciplinary networks to share ideas and collaborate on priority issues

Graduate Studies Modules – NUI Galway *GS505*

Graduate Studies Form for Modules attached to Structured PhD and/or Research Masters Programmes	
Title	Graduate Research Skills **School of Natural Sciences- additional requirements in blue (SNS)** **recommends years 1-3 for completion**
Credits (ECTS)	5
Module Places	Available to all new entrant / year 1-3 PhD candidates affiliated to the Colleges of: • Science • Engineering & Informatics • Medicine, Nursing & Health Sciences
Course Instance	
Module Code:	GS505
Responsible:	***School of Physics – Chair, RGE Committee, Physics**
Please indicate if generic (GS) or specialised module	Incorporating a blend of generic (GS) and discipline specific units as appropriate.

Indicative Module Descriptor:
This module aims to enable students to develop and acquire a range of generic and discipline specific research skills and gain an understanding of their practical application to the research process, in order to successfully complete fourth level research.

The module will be delivered over four semesters of the PhD programme and delivery will incorporate a blended learning approach including participant attendance at face-to-face units incorporating both generic and discipline specific themes and utilisation of supporting online courseware available via Blackboard.

By the end of this module, the student is expected to be able to:

- Demonstrate the ability to identify, access and critically evaluate the requisite specialised skills, technical training, and specialised diagnostic or other equipment required to carry out their research project
- Demonstrate the ability to write regular comprehensive reports of their research/ laboratory activities
- Demonstrate an ability to prepare and document annual plans that indicate their detailed strategy for the succeeding phases of the research
- Demonstrate an ability to exploit the extensive patent databases and to benchmark their research activity against the relevant patent literature **as appropriate**
- Demonstrate an ability to communicate their data or findings in poster format and to a peer audience in the discipline
- Demonstrate an understanding of the importance of a notarised notebook as a record of their original contributions to research
- **The Supervisor and Graduate Research Committee are primarily responsible for overseeing this module**

Workload:	
Class Contact	Contact hours: • Total 6-9 hours of which a minimum of 3 hours will be in the form of a face-to-face ½ day workshop and the remaining hours selected from either face-to-face or online self-paced learning

	units.
Workshop (other forms of educational activity)	• Required attendance at relevant discipline-specific *Getting Started on Your PhD* ½ day workshop • Plus attendance at a range of optional face-to-face workshops or self-directed learning via appropriate online modules, including generic and discipline specific themes. • **Graduate Studies expects that the School of Natural Sciences will provide the class and workshops**
Specified Assignment(s)	Aligned to the student's PhD research question, module participants will be required to: 4. Submit 2 referenced annual reports of their research progress (including projected future research activity plans) (Assessor: Graduate Research Committee) 5. Prepare a presentation on their work for presentation to a peer-audience in their discipline. (Assessor: Graduate Research Committee) 6. **Optional for SNS:** Maintain a reflective blog/journal (via Blackboard) outlining and tracking the processes and methods used to progress their research (Assessor: PhD Supervisor)
Autonomous Student Learning *(please specify)*	Following attendance at relevant workshops and / or use of online courseware, students will be expected to undertake independent research activities and apply their knowledge and skills in order to: • Produce comprehensive annual reports of their research, appropriately referenced and calibrated against recent work in their field. • Identify their needs for training in new techniques, and for access to facilities, information, and software, in order to complete their research. • Keep up-to-date with advances in their field • Develop an informed and appropriate strategy for upgrading their technical skills • Maintain a notarised notebook of their research activity.

Assessment(s)			
	Type	% of marks	Timing
• Annual reports outlining research progress and a critical assessment of training and other needs • Annual presentation to peer audience, describing their research progress and their plan for the completion of their project • Reflective blog entries **optional for SNS** • A well-structured research notebook, regularly updated and signed	**100%**		
Result	Pass / Fail		

Graduate Studies Form for Modules attached to Structured PhD and/or Research Masters Programmes	
Title	Professional Development: Publishing Research and Preparing for the Job Market
Credits (ECTS)	5 ECTs
Module Places	
Module Code: Please indicate if generic (GS) or specialised	GS510
Elective Places	

Indicative Module Descriptor:
The purpose of this module is to prepare PhD students to be successful in publishing in international journals and, ultimately, to obtain a job on graduation. The goal is for the students to have a clear understanding of how to turn their PhD thesis into journal publications by identifying suitable journals, and understanding what reviewers and editors are looking for in manuscripts. They will also gain insights into what they should be doing, over and above their PhD thesis, to allow them to be competitive in the job market. The students will hear from internationally experienced post doctoral students, researchers, lecturers, and professors from across the social science disciplines. These contributors will provide a practical approach to allow the students to learn from their successes (and failures).

Indicative Learning Outcomes:
On successful completion of this module, students will:

- understand how to prepare a research publication strategy based on their doctoral dissertation;
- understand how to prepare a manuscript for journal publication;
- understand what journal reviewers are looking for in a manuscript;
- understand how to decide which journal(s) they should target for publication;
- understand how they should deal with reviewer comments
- understand the job market, and expectations of academic employers both nationally and internationally; and
- have developed a CV and short biography.

Workload:

Class Contact	24 hours, separated into four half-day sessions.
Seminar-based delivery	The information will be delivered in the style of a seminar and interactive manner with students actively participating. Students will also be required to make presentations.
Specified Assignment(s)	Individual assignment: • Develop a research publication strategy based on their doctoral dissertation • Identify two journals to target for publication. Provide evidence of why these journals are suitable, and develop an outline (1,000 words) of a potential manuscript to submit to the journal. • A detailed review of an academic manuscript as would be carried out by a journal reviewer (1,500 words) • The development of an academic CV. • A short biography (<500 words) on the student similar to what is included in a grant application.
Autonomous Student Learning *(please specify)*	*Example :Pre-Practical Reading* • Join in class discussions and make class presentations

Assessment(s)			
	Type	% of marks	Timing
Individual Assignment (as described above – Specified Assignment)	**100%**		
Result	Pass / Fail		

Graduate Studies Form for Modules attached to Structured PhD and/or Research Masters Programmes	
Title	**Engaging with the community: research, practice and reflection**
Credits (ECTS)	10
Module Places	15
Module Code:	GS512
Elective Places	

Indicative Module Descriptor:
This module is designed as an experiential learning opportunity for Structured PhD research students. In the course of this module they will apply their discipline-specific knowledge/skills to the design, conduct and reporting of a community-engaged, applied research project. Working with the module team, each student will devise an individualised learning experience. The module is intended to accommodate a range of interests, from those students whose doctoral research is in social research through to students carrying out theoretical or laboratory-based projects.

Research topics/themes/problems for a research project may be identified by a community partner, by the individual student/s, by a multidisciplinary team, by relevant academic or research staff/units/groups within the university, or in collaboration with Community Knowledge Initiative (CKI).

Research students will have a shared learning experience through a series of preparatory and reflective seminars, organised on a multidisciplinary basis. Through seminar work, students will report on progress, share their learning, discuss opportunities and challenges, and identify their own learning needs. This reflective space will help link together participants working on potentially different projects in varied settings.

The module – and the accompanying seminars – will be facilitated by academics, researchers and community partner representatives (e.g., COPE Galway), working together to support students in learning about and carrying out community-engaged research. This professional input will combine expertise and experience in applied, collaborative and participatory research methods.

This module has been developed by a multidisciplinary team within NUI Galway as one of the intended outcomes of the Community Engaged Research in Action (CORA) project. The availability of this module to doctoral student and community partners, as a credit-bearing element of a Structured PhD programme, will contribute to the realisation of the civic engagement envisioned by the university as part of the student experience.

The module may be taken by Structured PhD or Research Masters level students, with the agreement of the relevant supervisor and/or programme director.

Aims of the module
The module aims to give students the opportunity to:

- Enhance their personal effectiveness, capacity for innovation and professional competence thus increasing their employability
- Develop research skills in an applied, real-world setting, in response to an identified research need
- Apply discipline-specific knowledge and skills to a research project
- Work collaboratively with a community partner and/or as part of a research team
- Work with people from other disciplines in solving research problems
- Develop a deeper insight into the impact of socio-economic conditions and public policy on real world issues
- Scrutinise and reflect on social norms and their own role as agents of change in society

Indicative Learning Outcomes:

On successful completion of this module, students should be able to;

- Critically evaluate the concept, nature, purpose of community engagement and be cognisant of

different modes of engagement
- Understand how collaborative and participatory methods can inform research practice, through the process of data collection, interpretation and representation
- Engage appropriately with partners in a community-engaged research project
- Conduct a research needs analysis with a community partner/s or contribute to a project already identified
- Plan, conduct, present and evaluate a research project in a collaborative manner
- Reflect critically on their own research practice, doctoral research and future professional practice
- Apply their disciplinary knowledge and skills to real world research inquiry
- Critically consider ethical issues that arise in real world research

Workload: *Total of 200 hours for 10 ECTs module*

Class Contact: Seminar attendance (A reflective space)	20 hours
Workshop: Participation in specific workshop/s, as per individual learning needs/skills gap	0-20 (as necessary)
Specified Assignment(s) Portfolio Presentation Evaluation	50
Autonomous Student Learning: Negotiating with community partner Group meetings with members of a team Planning the research design Conduct of project using collaborative and/or participatory methods Preparation for presentation of outcomes Self appraisal and preparation for evaluation	*110-130*

Assessment(s)

To be jointly assessed (as appropriate and as agreed) by the module facilitator/s, research team members, thesis supervisor and community partner.

1. *Portfolio*
Including, for example,
- Log of research activities (individual and/or group)
- Reflective journal
- Evidence of research practice

2. *Presentation*
(Oral, written, poster, or other medium as appropriate)
Individual or group presentation of research outcomes - process and/or product as appropriate.

3. *Evaluation*
Participation in evaluation by partners to research process
Including self/peer/group/community partner/external evaluation, as appropriate.

	Type	% of marks	Timing
Year 1: Participation in reflective seminars Assessment: portfolio, presentation Participation in evaluation process	Mandatory 100%		
Result	Pass 65% / Fail		

Module

PROFESSIONAL SKILLS - THESIS COMPLETION AND CAREER DEVELOPMENT

Module code: GSS3
Credits: 5
Semester: 2
Department: NIRSA
International:

Overview

Monday 23 – Wednesday 25 January 2012.
Location: AFF Seminar Room, Iontas Building.

Note: This module meets the requirements for GSS3 and GSA3; it will take place once during this academic year (in January 2012) and will not be repeated in semester 2. Minimum enrolment 10 students.

Module objectives:
The module will prepare students for the completion and defence of their thesis and life after their PhD, including career strategy, disseminating their work, applying for scholarships and jobs.

Module content:
Dissertation completion: Review of NUIM requirements—Using EndNote to manage bibliographies and references—Abstracts, Acknowledgements, Table of Contents—Using good Referencing Systems—Tables and Diagrams—Technical production of thesis—Making corrections

Viva preparation: Aims and purpose of the Viva—Modes of advance preparation—Responding effectively to questions about research—Dealing with critics and reviewers—Including mock vivas

Dissemination of dissertation: Locating projects in a wider field of scholarship and learning—Developing a sense of the scholarly and social value of your research project—Post-doctoral publications: submitting manuscripts or proposals to publishers and preparing articles for scholarly or other journals.

Career strategy: Post-PhD—Career paths—Research and teaching careers—Applying for postdoctoral scholarships—Research grant writing and applications—CV Writing and cover letter writing. Job Interviews

Learning Outcomes

On successful completion of the module, students should be able to:

- Be prepared for the completion and defence of their thesis and life after their PhD, including career strategy, disseminating their work, applying for scholarships and jobs

Teaching & Learning methods

- 18 hours (blocked into 3 full days) of workshops and practicals

Delivery methods	Hours
Lectures	24

UCD Research Skills & Career Development

Forbairt Ghairme & Taighde Scileanna UCD

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Networking both internally and externally

Researchers can develop their networking skills by contacting other colleagues, both within and outside of the university, and PI/Mentors may have some useful contacts that they would be willing to pass on. Talking to other researchers in the university about their role and the type of work in which they are involved is a useful way of understanding work in different contexts, and can help researchers make better informed decisions about potential moves to other environments. The opportunity to discuss experiences and exchange knowledge, insights and perspectives is a useful exercise and helps people to see challenges differently and even come up with creative solutions to move a situation forward.

Benefits of networking

Networking internally- raise your profile, source new project opportunities, strengthen relationships with stakeholders and gather information on requirements
Networking externally with peers - exchange of best practice knowledge, learn new methods, stay abreast of latest news or find knowledge or contacts to help a colleague.

How do they operate?

Networks are operated on an informal basis and are self managed so the ground-rules, procedures and areas for discussion are agreed by the network participants. The network can operate by email or face to face and as well as a forum for discussion and problem solving. It allows people a sounding board to test out new ideas in front of a cross disciplinary audience. It is recommended that in order to build and nurture interpersonal connections that the network meets face to face at least once every three months. However the idea is not to become too prescriptive so that the network is something that participants choose to maintain rather than it becoming an onerous obligation.

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UCD Research Skills & Career Development

Forbairt Ghairme & Taighde Scileanna UCD

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Project Management in the Research Context

Objectives:

To

Understand the difference between a 'project' and 'on-going activities'
Understand relationships between project components (resources, duration and scope)
Develop a project plan
Understand the concept of a 'critical path' and how changes in schedules and resource allocation affect the overall duration of the project
Identify the key stakeholders for your project and understand their influence and potential impact on a project
Identify and manage risk in your project including the risks related to the uncertainty of research outcomes
Have an awareness of the key project management tools you can use to manage your project.

Content

Project Concept
Defining the project
Project Planning
Project Implementation
Closing the Project
Project Management Tools
Comparing commercial and academic research
Practical Scenarios

Duration:

Self Managed

Delivery Method:

Online Resource

How to Access?

Please email researchcareers@ucd.ie for access to this resource.

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UCD Research Skills & Career Development

Forbairt Ghairme & Taighde Scileanna UCD

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Project Management for Researchers

Objectives:

To:

To discuss the relevance of project management in the business environment
Apply fundamental Project Management tools to real world projects
Carry out project progress and performance measurement and evaluation
Evaluate projects within your organisation
Demonstrate an understanding of the elements of a Project Management Methodology.

Content

Introduction to Project Management - Setting the scene
Methodology
Estimating & Costing
Planning and monitoring a project
Risk Management
Leadership & Stakeholder Management
Managing Project Teams

Duration:

2 days

Delivery Method:

Training Programme

How to Book?

Should you be interested in attending this programme please email researchcareers@ucd.ie. Please refer to the Events Calendar for scheduled dates.

Please note that as this programme runs during the day it is important that you agree your attendance on this programme with your PI/mentor/supervisor prior to attending.

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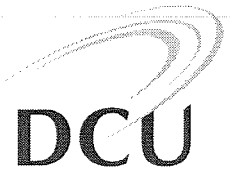

PITCHING YOUR RESEARCH TO INCREASE FUNDING POSSIBILITIES
Module duration: This course consists of 2 half days and 1 full day

Aims of this course:

- to develop a common language to speak to potential investors or business partners
- to convey the excitement and value of their research
- to understand and fulfil the expectations of industry and external stakeholders
- to create/improve a powerful power point presentation of their research for industry

At the end of this course, participants will be able to:

- identify and articulate what makes DCU different
- develop a structure and create openings and closings for presentations
- develop the body of the presentation including facts/benefits and evidence to support the proposal
- create a power point presentation for DCU yet allowing each participant to deliver their presentation in their own style

Target Audience:
This workshop will benefit both academic staff and experienced researchers who are currently involved in or will be involved in making oral presentations on their research to potential investors.

DCU

GRANT WRITING

Module duration: 1 day

Target Audience:
Researchers of any discipline who wish to apply as principal applicants for individual and/or project funding.

Aims of this course:
To cover aspects of grant writing that are directly relevant to grant proposals. The areas covered will include:

- assessment of the funding opportunities
- institutional procedures and budget preparation
- common mistakes
- proposal content
- reviewers
- collaborators
- strategic background to a proposal
- CV preparation
- what to do when rejected

At the end of this workshop, participants will have learned:

- important principles of writing successful grant applications in line with DCU and funding body procedures in order to succeed in competitive funding calls.

APPENDIX 3e
Norway

	R1 First stage researcher		R2 Recognised Researcher	R3 Established Researcher	R4 Leading Researcher
Status	Employee		Employees		
Overview	Structured PhD courses, - advanced disciplinary courses and to some degree courses on transferable/generic skills Career Centres at some institutions *Performance appraisals*		Many will access the R1 courses but also have access to continuous professional development opportunities through HR Career development courses for female researchers UiO, UiT *Performance appraisals*	Continuous professional development opportunities through HR Career development courses for female researcher UiO, UiT *Performance appraisals*	Continuous professional development opportunities through HR Career development courses for female researchers UiO, UiT *Performance appraisals*[20]
A. Research knowledge and skills	**Industrial PhD Programme** designed to equip researchers with industry relevant knowledge and transfer-able skills like: Interpersonal-, organizational-, cognitive-, and enterprise skills. See info Norwegian Research Council			Mentoring programmes for female researchers, UiO, UiT Programmes for Qualification for Professor-competence for female researchers UiO UiT	
B. Personal effectiveness		Mini courses on personal effectiveness Academic English	Mini courses on personal effectiveness Academic English Media Training NTNU	Mini courses on personal effectiveness Academic English Media Training NTNU	Mini courses on personal effectiveness, e.g.: "Leadership square", UiB
C. Research management				Development programme for research leaders UiO/National NTNU Programmes for female researchers, e.g.: Gender Action plan UiO Courses on	Dean- and Rector-school (National leadership courses for new deans and rectors, UHR) Department leadership NTNU Courses on supervision

[20] Performance appraisals (medarbeidersamtale) is increasingly used as a vehicle for dialogues between the employer and the emloyees regarding career development and planning, performance assessments and discussions on training needs. Performance appraisals is typically conducted yearly with all employees within a unit, but it is not done everywhere, and the way it is performed, - and followed up, does vary. No university has (to my knowledge) introduced this as a manadtory practice. But its use is increasing and many institutions offers courses for leaders on performance appraisals.

				supervision	
D. Public engagement and impact of research					Dean- and Rector-school National, UHR

APPENDIX 3f
Portugal

	R1 First stage researcher	R2 Recognised Researcher	R3 Established Researcher	R4 Leading Researcher
Status	Student / Employee	Employees		
Overview				
A. Research knowledge and skills	Conjunto de acções de formação em estatística aplicada as ciências, UA, (S2- áreas especificas, LS, A1) Acções de formação em varias áreas UA, (S2,A1,LS/ES) Curso em especialização em empreendedorismo tecnológico, UM, (S2-specific áreas, LS, A1) Pratico em software de gestão comercial, UM, (S2,A1,LS) Analise de dados e regresso, UP, (S1-ciencias de educação, A1,LS) Modelação computacional, UP, (S2,A1,LS/ES) Implementação de actividades curriculares, UP, (S2,A1,LS) Office 2007 training, UL, (S2,A1,LS) Utilização das TIC em contextos educativos (SEMINARIO), UL, (S2,A1,LS) Tecnologias moveis na educação, UL, (S2,A1,LS)	Seminario de apresentação do software Rhino3D, UA (S1-researchers in engineering and strong knowledge of software , LS/ES, A1) Principais de Neuromarketing-Neurociencias aplicadas as ciências do consumo, UA, (S2,A1,LS) Marketing na internet, UA, (S1, A1, LS) Analise quantitativa de dados com o SPSS, UA, (S1,LS,A1) Pedagogia e desenvolvimento curricular no ensino superior, UA, (S1-docentes do ensino superior, A1,LS) Tecnologias de informação, UA, (S1-docented do ensino superior, LS, A1) Docência e aprendizagem colaborativa no ensino superior, UA, (S1,A1,LS) Acções de formação em varias áreas, UA (S2,A1,LS/ES)	Principais de Neuromarketing-Neurociencias aplicadas as ciências do consumo, UA, (S2,A1,LS) Marketing no internet, UA, (S1, A1, LS) Analise quantitativa de dados com o SPSS, UA, (S1,LS,A1) Pedagogia e desenvolvimento curricular no ensino superior, UA, (S1-docentes do ensino superior, A1,LS) Tecnologias de informação, UA, (S1-docentesdo ensino superior, LS, A1) Docência e aprendizagem colaborativa no ensino superior, UA, (S1,A1,LS) Acções de formação em varias áreas, UA (S2,A1,LS/ES) Pratico em software de gestão comercial, UM, (S2,A1,LS)	Plano interno de formação, UA, (S1-docentes funcionários de UA, LS, A1)-moodle, repositórios, Google tools, Web 2.0 Pedagogia e desenvolvimento curricular no ensino superior, UA, (S1-docentes do ensino superior, A1,LS) Tecnologias de informação, UA, (S1-docented do ensino superior, LS, A1) Docência e aprendizagem colaborativa no ensino superior, UA, (S1,A1,LS) Acções de formação em varias áreas, UA (S2,A1,LS/ES) Pratico em software de gestão comercial, UM, (S2,A1,LS) Virtualização da docência-estratégias e módulos, UP, (S1-specific requirements, A1,LS) Planificação e

	Analise de redes sociais e métodos avançados de base de dados, UL, (S1-institute of social sciences,A2,LS) Cursos de pós-graduação (specific skills development for each of the áreas/courses offered at the university), UAberta, (S2,A1,LS) Curso de pós-graduação em segurança em sistemas de informação, UCatolica, (S1-informatics experience, A1,LS) Curso de pós-graduação em laser médicos, UCatolica, (S1-doctors,A2,LS) Uso de software na investigação qualitativa-Nvivo, UEvora, (not defined) Cursos para aprofundamento de conhecimento de Processo Bologna, UBI, (S2,A1,LS) Curso de utilização de TIC no processo do ensino, UBI, (S2,A1,LS) Curso em e-learning como ferramenta de aprendizagem, UBI, (S2,A1,LS) Cursos de pós-graduação em áreas especificas, UAçores, (not defined) Cursos livres de aprendizagem ao longo da vida, UAçores, (S2,A1,LS)	Pratico em software de gestão comercial, UM, (S2,A1,LS) Virtualização da docência-estratégias e módulos, UP, (S1-specific requirements, A1,LS) Planificação e implementação de um modulo educativo em ambiente, UP, (S2,A1,LS/ES) Estruturação e criação de percursos no moodle, UP, (S2,A1,LS/ES) Modelação computacional, UP, (S2,A1,LS/ES) Implementação de actividades curriculares, UP, (S2,A1,LS) Office 2007 training, UL, (S2,A1,LS) Analise de redes sociais e métodos avançados de base de dados, UL, (S1-institute of social sciences,A2,LS) Cursos de pós-graduação (specific skills development for each of the áreas/courses offered at the university), UAberta, (S2,A1,LS) Curso de pós-graduação em segurança em sistemas de informação, UCatolica, (S1-informatics department, A1,LS) Curso de pós-graduação	Virtualização da docência-estratégias e módulos, UP, (S1-specific requirements, A1,LS) Planificação e implementação de um modulo educativo em ambiente, UP, (S2,A1,LS/ES) Estruturação e criação de percursos no moodle, UP, (S2,A1,LS/ES) Modelação computacional, UP, (S2,A1,LS/ES) Implementação de actividades curriculares, UP, (S2,A1,LS) Office 2007 training, UL, (S2,A1,LS) Analise de redes sociais e métodos avançados de base de dados, UL, (S1-institute of social sciences,A2,LS) Curso de introdução acessibilidade em ambientes virtuais, UAberta, (S2, A1,LS) Curso de pós-graduação em segurança em sistemas de informação, UCatolica, (S1-informatics department, A1,LS) Curso de pós-graduação em laser	implementação de um modulo educativo em ambiente, UP, (S2,A1,LS/ES) Estruturação e criação de percursos no moodle, UP, (S2,A1,LS/ES) Modelação computacional, UP, (S2,A1,LS/ES) Implementação de actividades curriculares, UP, (S2,A1,LS) Office 2007 training, UL, (S2,A1,LS) Analise de redes sociais e métodos avançados de base de dados, UL, (S1-institute of social sciences,A2,LS) Curso de introdução acessibilidade em ambientes virtuais, UAberta, (S2, A1,LS) Curso de pós-graduação em segurança em sistemas de informação, UCatolica, (S1-informatics department, A1,LS) Curso de pós-graduação em laser médicos, UCatolica, (S1-doctors,A2,LS) Acção de formação para docentes: • Formação competências,

	Cursos de pós-graduação em áreas especificas, UMadeira, (S2,A1,LS) Cursos livres: Basic mathematics, immunity and infection, UMadeira, (S2,A1,LS) Cursos de especialização e pós-graduação-varias áreas, UTL, (S2,A1,LS/ES)	em laser médicos, UCatolica, (S1-doctors,A2,LS) Acção de formação para docentes: • Formação competências, resultados de aprendizagem e objectivos de aprendizagem, UBI, (S1-docentes de UBI, A1,LS) • Formação peer instruction, UBI, (S1-docentes de UBI, A1,LS) Cursos para aprofundamento de conhecimento de Processo Bologna, UBI, (S2,A1,LS) Curso de utilização de TIC no processo do ensino, UBI, (S2,A1,LS) Curso em e-learning como ferramenta de aprendizagem, UBI, (S2,A1,LS) Cursos de especialização e pós-graduação-varias áreas, UTL, (S2,A1,LS/ES)	médicos, UCatolica, (S1-doctors,A2,LS) Acção de formação para docentes: • Formação competências, resultados de aprendizagem e objectivos de aprendizagem, UBI, (S1-docentes de UBI, A1,LS) • Formação peer instruction, UBI, (S1-docentes de UBI, A1,LS) Cursos para aprofundamento de conhecimento de Processo Bologna, UBI, (S2,A1,LS) Curso de utilização de TIC no processo do ensino, UBI, (S2,A1,LS) Curso em e-learning como ferramenta de aprendizagem, UBI, (S2,A1,LS) Cursos de especialização e pós-graduação-varias áreas, UTL, (S2,A1,LS/ES)	resultados de aprendizagem e objectivos de aprendizagem, UBI, (S1-docentes de UBI, A1,LS) • Formação peer instruction, UBI, (S1-docentes de UBI, A1,LS) Cursos para aprofundamento de conhecimento de Processo Bologna, UBI, (S2,A1,LS) Curso de utilização de TIC no processo do ensino, UBI, (S2,A1,LS) Curso em e-learning como ferramenta de aprendizagem, UBI, (S2,A1,LS) Cursos de especialização e pós-graduação-varias áreas, UTL, (S2,A1,LS/ES)
B. Personal effectiveness	Curso pratico de ilustrador cs5, UA (S1-experienced users of softwares, A1, LS) Gestão do stress (S2,A1,LS) Técnicas de apresentação, ISCTE, (S2,LS,A1)	Técnicas de apresentação, ISCTE, (S2,LS,A1) Organização pessoal e gestão do tempo, ISCTE, (S2,A1,LS) Comunicação e	Técnicas de apresentação, ISCTE, (S2,LS,A1) Organização pessoal e gestão do tempo, ISCTE, (S2,A1,LS) Comunicação e	Técnicas de apresentação, ISCTE, (S2,LS,A1) Organização pessoal e gestão do tempo, ISCTE, (S2,A1,LS) Comunicação e

	Organização pessoal e gestão do tempo, ISCTE, (S2,A1,LS) Comunicação e desenvolvimento pessoal, ISCTE, (S2,A1,LS) Pensamento critico, ISCTE, (S2,A1,LS) Ética e deontologia, ISCTE, (S2,A1,LS) Multiculturalismo, ISCTE, (S2,A1,LS) Cursos de aperfeiçoamento, UL, (S1-faculty of medicine, A1,LS/ES) Cursos de aperfeiçoamento, UEvora, (not defined)	desenvolvimento pessoal, ISCTE, (S2,A1,LS) Pensamento critico, ISCTE, (S2,A1,LS) Ética e deontologia, ISCTE, (S2,A1,LS) Multiculturalismo, ISCTE, (S2,A1,LS) Cursos de aperfeiçoamento, UL, (S1-faculty of medicine, A1,LS/ES)	desenvolvimento pessoal, ISCTE, (S2,A1,LS) Pensamento critico, ISCTE, (S2,A1,LS) Ética e deontologia, ISCTE, (S2,A1,LS) Multiculturalismo, ISCTE, (S2,A1,LS)	desenvolvimento pessoal, ISCTE, (S2,A1,LS) Pensamento critico, ISCTE, (S2,A1,LS) Ética e deontologia, ISCTE, (S2,A1,LS) Multiculturalismo, ISCTE, (S2,A1,LS)
C. Research management	Cursos de formação avançada, UA: Gestão do tempo (S2,A1,LS) Protocolo e organização de tempo (S2,A1,LS) Compras e gestão de prestação de serviços, UA, (S1,A1,LS) Gestão de projectos, UA, (S1,A1,LS) Resolução de problemas e tomada de decisão, ISCTE, (S2,A1,LS) Planeamento de projectos utilizando ferramentas informáticas, ISCTE, (S2,A1,LS/ES) Trabalho em equipa, ISCTE, (S2,A1,LS)	Compras e gestão de prestação de serviços, UA, (S1,A1,LS) Gestão de projectos, UA, (S1,A1,LS) Compras e gestão de prestação de serviços, UA, (S1,A1,LS) Gestão de projectos, UA, (S1,A1,LS) Resolução de problemas e tomada de decisão, ISCTE, (S2,A1,LS) Planeamento de projectos utilizando ferramentas informáticas, ISCTE, (S2,A1,LS/ES) Trabalho em equipa, ISCTE, (S2,A1,LS)	Compras e gestão de prestação de serviços, UA, (S1,A1,LS) Gestão de projectos, UA, (S1,A1,LS) Compras e gestão de prestação de serviços, UA, (S1,A1,LS) Gestão de projectos, UA, (S1,A1,LS) Resolução de problemas e tomada de decisão, ISCTE, (S2,A1,LS) Planeamento de projectos utilizando ferramentas informáticas, ISCTE, (S2,A1,LS/ES) Trabalho em equipa, ISCTE, (S2,A1,LS)	Compras e gestão de prestação de serviços, UA, (S1,A1,LS) Gestão de projectos, UA, (S1,A1,LS) Resolução de problemas e tomada de decisão, ISCTE, (S2,A1,LS) Planeamento de projectos utilizando ferramentas informáticas, ISCTE, (S2,A1,LS/ES) Trabalho em equipa, ISCTE, (S2,A1,LS) Gestão de conflitos, ISCTE, (S2,A1,LS/ES) Condução de reuniões, ISCTE,

	Gestão de conflitos, ISCTE, (S2,A1,LS/ES) Condução de reuniões, ISCTE, (S2,A1,LS) Diversidade no local do trabalho, ISCTE, (S2,A1,LS) Workshop-Estratégia empresarial e planeamento do marketing para PME, UM, (S2,A1,LS) Liderar e motivar as equipas, UM, (S2,A1,LS) Gestão comercial, UM, (S2,A1,LS) Liderança escolar, UM, (S2,A1,LS) Economia e gestão para farmacêuticos, UP, (S2,A1,LS) Gestão de mudança organizacional, UL, (S2,A1,LS) Curso em Business Intelligence, UCatólica, (S2,A1,LS) Curso de curta duração: workshop em gestão de equipa, UEvora, (not defined) Workshop on public relations, UBI, (S2,A1,LS)	Gestão de conflitos, ISCTE, (S2,A1,LS/ES) Condução de reuniões, ISCTE, (S2,A1,LS) Diversidade no local do trabalho, ISCTE, (S2,A1,LS) Workshop-Estratégia empresarial e planeamento do marketing para PME, UM, (S2,A1,LS) Liderar e motivar as equipas, UM, (S2,A1,LS) Gestão comercial, UM, (S2,A1,LS) Economia e gestão para farmacêuticos, UP, (S2,A1,LS) Curso de gestão e avaliação de performance, UP, (S2,A1,LS) Gestão de mudança organizacional, UL, (S2,A1,LS) Curso em Business Intelligence, UCatólica, (S2,A1,LS) Workshop on public relations, UBI, (S2,A1,LS)	Gestão de conflitos, ISCTE, (S2,A1,LS/ES) Condução de reuniões, ISCTE, (S2,A1,LS) Diversidade no local do trabalho, ISCTE, (S2,A1,LS) Workshop-Estratégia empresarial e planeamento do marketing para PME, UM, (S2,A1,LS) Liderar e motivar as equipas, UM, (S2,A1,LS) Gestão comercial, UM, (S2,A1,LS) Economia e gestão para farmacêuticos, UP, (S2,A1,LS) Curso de gestão e avaliação de performance, UP, (S2,A1,LS) Gestão de mudança organizacional, UL, (S2,A1,LS) Curso em Business Intelligence, UCatólica, (S2,A1,LS) Workshop on public relations, UBI, (S2,A1,LS)	(S2,A1,LS) Diversidade no local do trabalho, ISCTE, (S2,A1,LS) Workshop-Estratégia empresarial e planeamento do marketing para PME, UM, (S2,A1,LS) Liderar e motivar as equipas, UM, (S2,A1,LS) Gestão comercial, UM, (S2,A1,LS) Economia e gestão para farmacêuticos, UP, (S2,A1,LS) Curso de gestão e avaliação de performance, UP, (S2,A1,LS) Gestão de mudança organizacional, UL, (S2,A1,LS) Curso em Business Intelligence, UCatolica, (S2,A1,LS) Workshop on public relations, UBI, (S2,A1,LS)
D. Public engagement and impact of research	Cursos de formação avançada, UA: • Como realizar apresentações de sucesso (S2,A1,LS)	Escrita de textos técnicos e científicos, ISCTE, (S2,A1,LS) Atendimento ao publico, UP, (S2,A1,LS)	Escrita de textos técnicos e científicos, ISCTE, (S2,A1,LS) Atendimento ao publico, UP, (S2,A1,LS)	Escrita de textos técnicos e científicos, ISCTE, (S2,A1,LS) Atendimento ao publico, UP, (S2,A1,LS)

	• Communicacao e atendimento ao cliente (S2,A1,LS) • Oficina de argumentação (S2,LS,A2-with UINFOC Unidade Integrada de Formacao Continuada) • Como organizar apresentações (S2,LS,A1) Escrita de textos técnicos e científicos, ISCTE, (S2,A1,LS) Atendimento ao cliente, UM, (S2,A1,LS) Atendimento ao publico, UP, (S2,A1,LS) Workshop em redacção e publicação cientifica, UP, (S2,A1,LS) Redacção cientifica, UP, (S2,A1,LS) Comunicação de informação, UP, (S2,A1,LS) Formação em prestação de serviços, UP; (S2,A1,LS) Higiene e segurança no trabalho, UL, (S2,A1,ES) Formação em pesquisa e gestão de informação, UL, (S1-faculty of education, A1, LS)	Workshop em redacção e publicação cientifica, UP, (S2,A1,LS) Redacção cientifica, UP, (S2,A1,LS) Comunicação de informação, UP, (S2,A1,LS) Formação em prestação de serviços, UP; (S2,A1,LS) Higiene e segurança no trabalho, UL, (S2,A1,ES) Formação em pesquisa e gestão de informação, UL, (S1-faculty of education, A1, LS)	Workshop em redacção e publicação cientifica, UP, (S2,A1,LS) Redacção cientifica, UP, (S2,A1,LS) Comunicação de informação, UP, (S2,A1,LS) Formação em prestação de serviços, UP; (S2,A1,LS) Higiene e segurança no trabalho, UL, (S2,A1,ES)	Workshop em redacção e publicação cientifica, UP, (S2,A1,LS) Redacção cientifica, UP, (S2,A1,LS) Comunicação de informação, UP, (S2,A1,LS) Formação em prestação de serviços, UP; (S2,A1,LS) Higiene e segurança no trabalho, UL, (S2,A1,ES)

If possible please provide a measure of how widely available the course is based on:
Availability
A1 – low available at a single institution
A2 – medium available at a number of institutions
A3 – large available nationally (note that this could also be a type of course that is

available nationally, e.g. in Ireland courses on research ethics are available for all PhD students in every university however the course itself is delivered locally)

Access
Is the course available to a select group (S1) of researchers or to the whole community (S2). For example, you would indicate S1 if the course is available only for doctoral candidates on a particular PhD programme.
Remember that "training" comes in many forms and is not confined to well-defined courses and professional accreditations. At senior level, it may come through collaborations with academics in other countries on supervision, for example. In this context it is important to recognize that there are two broad forms of skills training:

- ***Learned Skills (LS)*** acquired through dedicated Teaching & Learning courses (including classroom, workshop and online)
- ***Experiential Skills (ES)*** acquired through experience (e.g. teaching skills through running tutorials, supervising laboratory sessions and lecturing)

ACRONYMS:
UA- Universidade de Aveiro
UP- Universidade do Porto
UC- Universidade de Coimbra
UM- Universidade do Minho
UTL- Universidade Técnica de Lisboa
UNL- Universidade Nova de Lisboa
UL- Universidade de Lisboa
ISCTE-IUL- ISCTE-Instituto Universitário de Lisboa
UAberta- Universidade Aberta
UCatolica- Universidade Católica
UTAD- Universidade de Trás-os-Montes e Alto Douro
UAlgarve- Universidade do Algarve
UBI- Universidade de Beira Interior
UAçores- Universidade de Açores
UMadeira- Universidade de Madeira

Skills Training Template Overview

UNIVERSIDADE DE AVEIRO
-offers specialized courses depending on the area, short or long-term courses (they are available for PhD students and others who want to deepen their knowledge or skills in certain areas).
-there are a lot of courses de formação especially for health professionals, teachers of primary and secondary education, managers, engineers etc.
-there are also courses at the university level which aim at developing generic skills, either just of their staff and faculty, or other population as well.
ISCTE-IUL
-there are courses of transversal skills focusing on: systemic abilities, interpersonal abilities, and instrumental abilities. They are not restrictive and they are available at the university level.
UNIVERSIDADE DE COIMBRA

-nothing could be found

UNIVERSIDADE DO MINHO

-not many courses available (at least concluding from the data available online). There are some specialization courses for professionals which are not restricted to certain population, profession type etc.

UNIVERSIDADE DO PORTO

-Porto has a lot of area-specific courses (similar to Aveiro). They are not restrictive and can be attended by all types of researchers in order to upgrade their skills or enhance their existing knowledge.

-a lot of courses for training people who work for companies and firms in the engineering and informatics sector is available as well.

-courses developing generic skills are available at the university level

UNIVERSIDADE TECNICA DE LISBOA

-a great amount of area-specific courses developing certain skills is available

UNIVERSIDADE NOVA DE LISBOA

-could not find anything

UNIVERSIDADE DE LISBOA

- has a lot of skills courses in a variety of disciplines (actually, it varies across faculties. Faculties also organize specific courses available for all the disciplines and programmes at the very faculty).

-there are courses aimed at professionals, working people/formação.

-there seem to be no courses for developing generic skills at the university level available (website data).

UNIVERSIDADE ABERTA

-they also have courses of specific skills which depend on subject area.

-they offer a variety of courses for professionals and working people which can be attended by researchers at all levels.

UNIVERSIDADE CATOLICA

-courses for professionals (especially business), and working people are available.

-availability of post-graduation courses (aiming at developing specific skills) in different areas.

-nothing on developing generic skills in particular has been found (website data).

UNIVERSIDADE DE EVORA

-offers courses of: technical specialization, formation (for professor at universities and teachers in primary and secondary schools), and short-term and long-term courses for developing skills in certain areas.

-there is a lack of information on the courses' contents (website data).

UNIVERSIDADE DE TRAS-OS-MONTES E ALTO DOURO

-nothing found.

UNIVERSIDADE DO ALGARVE

-a few post-graduation courses in specific areas available.

-there is no information on the content of the courses (website data).

UNIVERSIDADE DE BEIRA INTERIOR

-has a specific programme, designed and written every year, for advancement of skills of their professors. As a part of the programme they offer specialization and formation courses for their professors, but also for other faculty members who feel they need to improve certain skills.

-they also offer specialization courses for professionals and working people from different areas.

UNIVERSIDADE DOS AÇORES

-they offer post-graduation courses of open character and specialization courses for professionals, mainly teachers of primary and secondary education. They also offer cursos livres de aprendizagem ao longo da vida from various area-specific subjects.

UNIVERSIDADE DE MADEIRA

-have a couple of post-graduation courses in specific areas and cursos livres (some are area specific; others are more generic, e.g. Basic Mathematics).

General Overview

The majority of the universities offer area-specific courses and specialization courses for skills acquisition. There seem to be a lot of training courses for professionals and working people present at universities across Portugal. These may also be attended by researchers at all stages. In fact, the courses are usually not restrictive, however some previous knowledge and skill possession is desirable. The courses are also usually held at the university which promotes them, and little to none inter-university, or company/organisation-university cooperation is noticeable. Some universities offer courses which develop generic skills; such is the case with the University of Aveiro, the University of Porto and ISCTE-IUL. The offer of generic skills at the university level seems to be the best at ISCTE.

Non-degree Courses Usually Found at Portuguese Universities:

- Cursos de curta duração
- Cursos de longa duração
- Cursos de formação
- Cursos de formação avançada
- Cursos de especialização
- Cursos de pós-graduação
- Cursos de aperfeicoamento
- Cursos de aprendizagem ao longo da vida
- Cursos de formação aos professores
- Cursos de valorização profissional

APPENDIX 3g
Slovenia

Skills training: Slovenia

	R1 First stage researcher	R2 Recognised Researcher	R3 Established Researcher	R4 Leading Researcher
Status	Employee/Grant holder	Employees/Grant holder	Employee	
Overview	**Structured PhD training** with transferable/generic skills and advanced disciplinary courses. Well established, **Young researchers program** (since 1985), founded by **Agency for Research** http://www.arrs.gov.si/en/agencija/naloge.asp. **Program Young researchers from real sector**. Researchers can apply for staff scholarships at the **Slovene HRD and scholarship fund** http://www.sklad-kadri.si/en/.	**Structural post-doc research programs**, founded **by Agency for research.** **Almost no structured HRD programs for researchers, mainly individually driven personal development.** Researchers can apply for staff scholarships at the **Slovene HRD and scholarship fund** http://www.sklad-kadri.si/en/. Many researchers have **double roles**: they are at the same time teachers and researchers. Some are members of public funded research programs groups, some are independent researchers.	**Almost no structured HRD programs for researchers, mainly individually driven personal development.** Researchers can apply for staff scholarships at the **Slovene HRD and scholarship fund** http://www.sklad-kadri.si/en/. Many researchers have **double roles**: they are at the same time teachers and researchers. Some researchers are members of public funded research programs groups, some are independent researchers.	
A. Research knowledge and skills	Methodological curses Epistemological courses Laboratory/practical/ work			
B. Personal effectiveness	Publishing research Preparing for the Job Market Thesis Completion Entrepreneurship skills (on faculties and in organization of the **Ljubljana University Incubator (LUI).** Applying for grants Language courses Presentation skills Networking Flexible approach to change Conflict resolution	Applying for grants Publishing research		

	Expertise Team and group work abilities Communication Strategic focus on the selected field Knowledge of the environment of the selected discipline or field Application of methodological tools Analytical abilities	
C. Research management	Project Management in the Research Context Intellectual property	Project Management in the Research Context
D. Public engagement and impact of research	Night of Researchers Participation in Target research programs	Lecturing Coordination/participation in the **Target research programmes** (Slovenian abbreviation is CRP) represent a system created in 2001 for inter-sectoral cooperation in planning and implementing networked R&D projects for specific areas of public interest. **IRI UL - Institute for Innovation and Development of University of Ljubljana** - was established in 2007 by the University of Ljubljana and by leading Slovenian companies as the innovation and development institute and service for knowledge and technology transfer of Slovenia's largest University. **The Research Infrastructural Centers Network – MRIC UL** – comprises infrastructural centres that provide specialized technical, instrumental, expert and informational support for the research and infrastructural groups of the University of Ljubljana, its pedagogical activity and users outside the University. Actions of the **Slovenian Science Foundation** http://www.szf.si/?lang=en, a not-for-profit national institution intended to accelerate and promote science and research

APPENDIX 3h
UK

	R1 First stage researcher	R2 Recognised Researcher	R3 Established Researcher	R4 Leading Researcher
Status	Student / Employee All universities follow the QAA Quality Code for research degrees (A3, S1) www.qaa.ac.uk/Newsroom/Consultations/Pages/research-degrees.aspx	Employees All UK universities and research funders have signed up to the UK Concordat to Support the Career Development of Researchers (A3, S2) www.vitae.ac.uk/concordat		
Overview	All universities have a comprehensive programme of training for doctoral researchers from induction through to graduation and employment (A3, S1). www.ed.ac.uk/schools-departments/institute-academic-development/postgraduate/doctoral/courses/course-list Most universities allow doctoral researchers to access staff development courses (A3, S2). www.lse.ac.uk/intranet/LSEServices/TLC/TLCPhD/tech.aspx	Research-intensive universities have a targeted programme of training for research staff (A3, S1) www.skills.cam.ac.uk/postdocs/ Research staff will also be able to access staff development courses (A3, S2) www.exeter.ac.uk/staff/development/research/rdp/ Most research staff will be expected to participate in appraisal and review processes (A3, S1) www.gla.ac.uk/services/staffdevelopment/learningcoursesandresources/performancedevelopmentreview/	All universities have staff development programmes covering a range of training activities (A3, S2) www.warwick.ac.uk/services/ldc/ All universities will have regular appraisal and review processes for staff (A3, S2) www.qub.ac.uk/directorates/HumanResources/PersonnelDepartment/Appraisal/	As well as accessing staff development activities, some universities will also provide specific leadership programmes senior staff (A2, S1) www.dur.ac.uk/hr/training/acadleers/ www.sheffield.ac.uk/hr/sld/lmd/sleldleader/sl4
A. Research knowledge and skills	All universities have language provision (A3, S1). Examples include: www.admin.ox.ac.uk/personnel/staffinfo/benefits/development/#d.en.52094 www.liv.ac.uk/conted/summer_2009/courses_in_liverpool/Language_Courses.htm UK training for researchers in using and accessing information resources and services (A3, S2) www.rin.ac.uk/our-work/researcher-development-and-skills			

	All universities will have targeted subject-specific training for doctoral researchers, usually at departmental level. (A3, S1). www.liv.ac.uk/gradschool/research_degree/subjectspecific.htm www.ed.ac.uk/schools-departments/institute-academic-development/postgraduate/doctoral/courses	Most researchers at these levels will develop their research knowledge and skills on the job.		
	All universities provide subject-specific skills training (A3, S2) www.mpls.ox.ac.uk/skills/courses www.artsmethods.manchester.ac.uk/			
B. Personal effectiveness		Example of specific training to help transition from R2 to R3 (A2, S1) www.academiccareer.manchester.ac.uk/foryou/postdoc/ www.bris.ac.uk/researchstaff/yourcareer/stayingacademia/		
		All universities have appraisal and personal development review processes (A3, S2) www.staffnet.manchester.ac.uk/employment/training/leadership-management/performance-and-developmer www.bangor.ac.uk/hr/staffdevelopment/developingperformancemanagementskills.php.en		
	Vitae have courses and resources to help researchers in their effectiveness (A3, S2) www.vitae.ac.uk/researchers www.vitae.ac.uk/researchers/337551/Courses-and-events.html; www.vitae.ac.uk/researchers/15672/GRADschools.html			
	All university career services support postgraduate researchers. Some have dedicated careers advisors (A3, S1) www.sheffield.ac.uk/careers/postgraduates www.careers.manchester.ac.uk/students/postgraduates/	Some universities have dedicated career advisors for research staff (A2, S1) www.ucl.ac.uk/careers/researchers/staff www2.warwick.ac.uk/services/ldc/development/#4	Some universities offer career coaching (A2, S1) www.bristol.ac.uk/pwe/career-coaching	
C. Research management	UK Concordat to support research integrity (in consultation) (A3, S2) www.universitiesuk.ac.uk/Publications/Pages/workinprogress.aspx			

		Most universities offer financial, project management, IP and applying for funding training (A3, S2) www.dundee.ac.uk/media/dundeewebsite/opd/documents/OPD%20brochure%20WEB.pdf http://staffdev.ilrt.bris.ac.uk/staffdevelopment/courses/directory/courselist.pl?sect=lm&sort=xcode&updown=c#SD1PRO www.ed.ac.uk/schools-departments/institute-academic-development/research-roles/research-only-staff/courses/bus-man-skills www.nottingham.ac.uk/researchstaff/training-and-development/research-environment-and-context.aspx www.york.ac.uk/admin/hr/courses/course.cfm?c=RD0059 The UK research office offers training e.g. Getting the Most out of European Funding (A3, S2) www.ukro.ac.uk/aboutukro/training/Pages/index.aspx
	All Universities provide training in research skills, e.g. project management, ethics (A3, S1) www.training.cam.ac.uk/event/226476 www.sddu.leeds.ac.uk/sddu-index-of-research-student-courses.html www.gla.ac.uk/students/jobs/researcherdevelopment/planyourprofessionaldevelopment/researchgovernanceandorganisation/	Overview of research governance provision (UK provision) (A2, S2) www.lfhe.ac.uk/governance/
D. Public engagement and impact of research	UK Concordat for Engaging the Public with Research (A3; S2) www.rcuk.ac.uk/per/Pages/Researchers.aspx	
		Resources and training for the commercialisation of research (A3, S2) www.praxisunico.org.uk/training/courses.asp All universities have equality and diversity training and resources for new and aspiring research leaders (A3 S2) www.st-andrews.ac.uk/staff/ppd/developyourself/courses/DiversityTrainingforManagers/ Vitae provide resources to support equality and diversity and for new and aspiring research leaders (A3, S1) www.vitae.ac.uk/everyresearchercounts, www.vitae.ac.uk/pi
	Communicating research is supported by National funding bodies and organisations (A3, S2) www.wellcome.ac.uk/Education-resources/Communicating-your-research/index.htm NCCPE- How to do it support materials www.publicengagement.ac.uk/how Vitae has courses and resources on working with others and leadership (A3, S2) www.vitae.ac.uk/researchers, www.vitae.ac.uk/researchers/473131/Leadership-development.html	All universities provide people management training, e.g. developing staff, recruitment and selection, appraisal training (A3, S2) www.dundee.ac.uk/media/dundeewebsite/opd/documents/OPD%20brochure%20WEB.pdf www.staffnet.manchester.ac.uk/employment/training/leadership-management/management-courses/ All universities provide supervisor training (A3, S2) www.cardiff.ac.uk/ugc/quality/supervisingresearchstudents/supresstuc html

	UK professional recognition for teaching and learning: Associate fellow: (A3, S1) www.heacademy.ac.uk/associate-fellow All universities will provide writing and communication skills training (A3, S2) www.ed.ac.uk/schools-departments/institute-academic-development/research-roles/research-only-staff/courses/comms-skills http://training.csx.cam.ac.uk/event/218899		www.training.cam.ac.uk/cppd/course/cppd-acprac5 Most universities provide media training (A2, S2) http://staffdev.ilrt.bris.ac.uk/staffdevelopment/courses/directory/course.pl?sect=coas&sort=xcode&updown=asc#SD1TIS www.dundee.ac.uk/media/dundeewebsite/opd/documents/OPD%20bhure%20WEB.pdf All universities provide training or guidance for examiners (A3, S2) www.surrey.ac.uk/library/researcher/academic/workshops/examiner_wkshop.htm	
			UK professional recognition for teaching and learning: Fellow: (A3, S1) www.heacademy.ac.uk/fellow	All universities have leadership a development programmes (A3, S www.ed.ac.uk/schools-departments/leadership-development/leadership-programme/overview www.sheffield.ac.uk/hr/sld/lmd/sheldleader/ Leadership Foundation provide a range of leadership programmes senior research managers (A3; S www.lfhe.ac.uk/support/ UK professional recognition for teaching and learning: Senior Fellow (A3, S1) www.heacademy.ac.uk/senior-fellow

APPENDIX 4

EUA - Skills provision in doctoral education

At the doctoral level, many universities do provide taught courses in transferable skills as well as skills awareness through career services such as career centres. EUA-CDE has some quantitative evidence about the developments, and there are a large number of detailed examples publicly available from our events webpage: http://www.eua.be/cde/meetings-and-events/past-events.aspx and from http://www.eua.be/eua-work-and-policy-area/research-and-innovation/doctoral-education/doc-careers-ii/

In the ARDE[21] survey from 2011, 79 % of the respondents had career development services, very often transferable skills training. The main trends in transferable skills training is 1) the development of two models: a comprehensive approach with a coherent offer of courses that are logically interconnected or an 'à la carte'-approach with a range of different courses to choose from. There is anecdotal evidence that fewer assign credits (ECTS or otherwise) to these courses. Many use external providers as these are seen to be able to give a non-university perspective and has approximately the same cost as using internal teachers.

2) Many turn to external funding for the skills provision. Depending on national programmes, structural funds can be used for this for 'human capital investment'. In countries where structured doctoral education has been traditionally linked to externally funded programmes (Germany and to some extend Finland), skills provision is part of these programmes and its sustainability depends on the extent of the funding. The UK is an interesting examples, where skills provision has lost its funding source (the Roberts Funding), but universities have chosen to continue with internal funds. In the German excellence initiative, universities must pledge to secure sustainability after funding stops as part of the programme.

In the DOC-CAREERs project, one major finding was that large companies are looking mostly for technical skills and have the capacity to train staff in-house for generic skills, while SMEs are more interested in recruiting staff that already had training.

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[21] Survey on the implementation of quality management systems at European universities – N=112 institutions (app. 130,000 doctoral candidates). www.eua.be/arde

APPENDIX 5

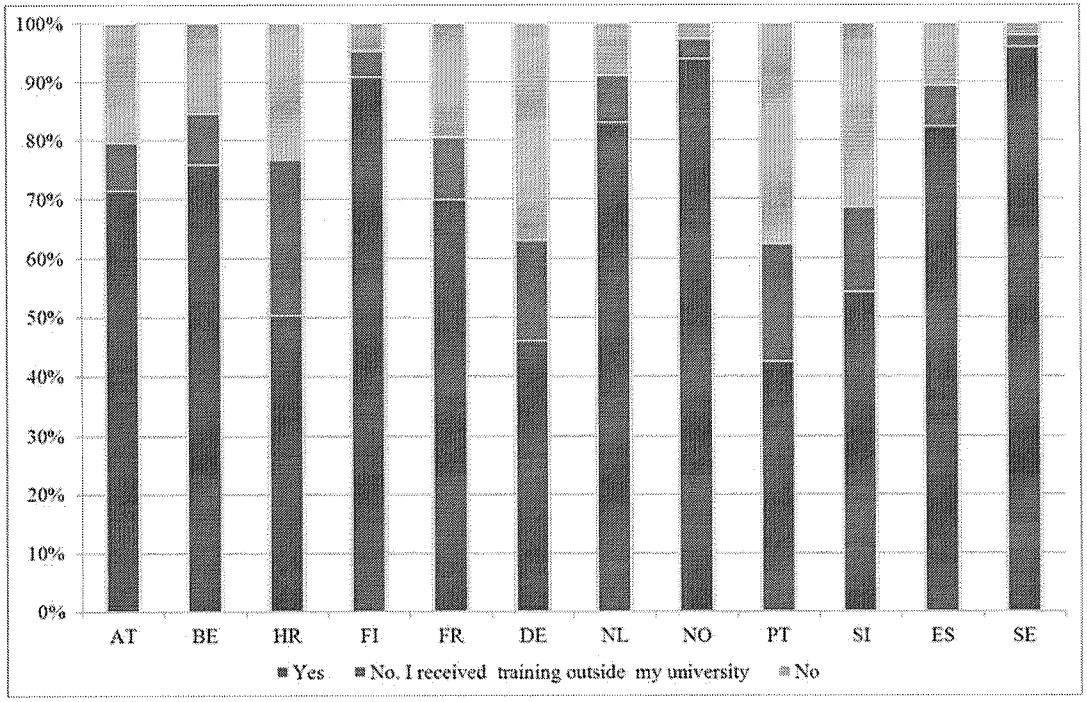

eurodoc
The European Council of Doctoral Candidates and Junior Researchers
SGHRM Meeting
25 April 2012
Transferable Skills –
Eurodoc Input (updated)

Background Information from Eurodoc Survey I

In 2011, Eurodoc published the Eurodoc Survey I (Ateş et al., 2011), a large-scale, pan-European survey on the situation of doctoral candidates and young researchers (*N*=7561). Among others, the questionnaire comprised several questions measuring training opportunities during the doctorate. The most important results will be briefly described in the following to provide background information on training possibilities (transferable skills) for early stage researchers.

A general question on whether the doctoral candidate receives any kind of training at his/her university during the doctorate was strongly affirmed in five of the twelve surveyed countries[1] (more than 80% of the participants answering with "Yes"): FI, NL, NO, ES, and SE.

Figure 1: Did you receive any kind of training (e. g. courses) at your university during your doctorate? (By Country)



Note. *N*=6611, valid percentages, valid n. Source: Eurodoc data set (December 2010).

On a more specific level, it was measured whether training was compulsory or not. As Table 1 shows, training on transferable skills seems to be mainly offered on a voluntary basis.

[1] The 12 countries included in the final report are Austria, Belgium, Croatia, Finland, France, Germany, the Netherlands, Norway, Portugal, Slovenia, Spain, and Sweden.

Table 1: Was the training you received voluntary or mandatory? - Transferable skills, e.g. presenting, report writing, project management etc. (By Country)

	Voluntary (mentioned)	Mandatory (mentioned)	Not applicable	Total
Austria	46.4%	23.2%	30.4%	349
Belgium	63.1%	12.3%	24.6%	203
Croatia	33.3%	20.3%	46.3%	123
Finland	65.3%	18.5%	16.3%	504
France	45.3%	21.5%	33.2%	539
Germany	61.2%	18.1%	20.7%	392
Netherlands	53.1%	29.4%	17.5%	401
Norway	44.4%	20.3%	35.3%	617
Portugal	30.5%	30.2%	39.2%	311
Slovenia	35.0%	30.8%	34.2%	117
Spain	29.9%	31.1%	39.0%	241
Sweden	39.8%	40.2%	20.0%	405

Note. N=4202, valid percentages, valid n. Source: Eurodoc data set (December 2010).

As the category "not applicable" includes people who did not have access to a transferable skills training at their home institution, it gives a hint of the prevalence of this kind of training among doctoral candidates.

When looking at the satisfaction with the transferable skills training, the most satisfied doctoral candidates (respondents indicating '4' or '5' on a 5-point response scale, 5=very satisfied) are found in Belgium, Germany, and the Netherlands (cf. Table 2).

Table 2: To what extent are you satisfied with the training you received? - Transferable skills (e.g. presenting, report writing, project management etc.) (By Country)

1 N	ot at all satisfied	2	3	4 5	Very satisfied	Tota l
Austria	12.2%	13.5%	28.9 %	27.6%	17.8%	304
Belgium	4.5%	8.5%	26.7 %	42.6%	17.6%	176
Croatia	22.7%	17.6%	25.2 %	22.7%	11.8%	119
Finland	4.4%	14.4%	35.0 %	35.4%	10.8%	500
France	12.3%	12.7%	32.5 %	29.4%	13.1%	489
Germany	5.7%	8.6%	27.5 %	38.4%	19.8%	349
Netherlands	1.8%	7.3%	28.9 %	46.1%	15.9%	384
Norway	8.9%	15.7%	38.9 %	27.3%	9.1%	527
Portugal	8.6%	15.5%	30.2 %	32.7%	12.9%	278

Note. N=3860, valid percentages, valid n. Source: Eurodoc data set (December 2010)

Referring to the results presented in Table 1, rather high percentages of voluntary participation in transferable skills trainings can be found for these three countries (BE 63.1%, DE 61.2%, NL 53.1%). However, whether there is some kind of relationship between voluntariness in training participation and satisfaction with the training remains an open question.

Table 3 illustrates in which sector doctoral candidates would want to work after finishing their doctorate (it was possible to give multiple responses). The overwhelming majority wishes to stay in the academic research sector (university), followed by the public and the private non-academic research sector. However, as the capacities of universities and other research sectors to employ researchers are limited, this speaks for a need to support doctoral candidates in setting realistic goals for their future employment.

Table 3: In which sector would you want to work after finishing your doctorate? (By Country; Multiple response)

	Academic research sector (University)	Public non-academic research sector	Private non-academic research sector	Public non-research sector	Private non-research sector	Non Governmental Organisation (NGO)	Military	Other	Total
Austria	69.5%	45.5%	50.5%	22.7%	31.3%	16.1%	1.6%	4.2%	547
Belgium	79.4%	50.9%	46.3%	26.7%	25.3%	20.6%	1.8%	5.7%	281
Croatia	83.2%	35.0%	21.7%	8.7%	11.9%	6.3%	2.4%	1.7%	286
Finland	75.7%	49.6%	52.2%	28.7%	28.8%	17.5%	4.4%	5.0%	617
France	74.8%	47.8%	46.0%	15.7%	19.9%	13.3%	2.1%	3.6%	941
Germany	68.4%	46.0%	43.2%	27.8%	30.3%	24.0%	1.3%	5.4%	946
Netherlands	79.3%	52.4%	41.7%	23.6%	18.5%	19.0%	2.2%	6.3%	542
Norway	82.1%	40.5%	48.0%	18.7%	21.8%	14.4%	2.2%	3.6%	721
Portugal	79.5%	37.1%	39.1%	14.1%	17.9%	9.1%	1.5%	3.2%	821
Slovenia	73.1%	52.5%	50.4%	15.5%	18.1%	11.8%	8.8%	2.1%	238
Spain	81.3%	51.9%	36.8%	9.5%	10.1%	12.8%	2.7%	3.3%	337
Sweden	74.1%	46.5%	60.2%	22.4%	28.3%	16.1%	3.0%	3.0%	460

Note. N=6737, valid percentages, valid n. Percentages and totals based on respondents.
a. Dichotomy group tabulated at 1. Source: Eurodoc data set (December 2010)

Best Practices/ Examples

With regard to best practices a short-notice request among the Eurodoc members revealed a few examples of which two shall be mentioned:

· *France – L'Universite Nantes Angers le Mans*
The university introduced a new programme in which they hire an HR consultant who gives advice to students on one to one basis for 1-2 hours. At the same time they have launched a 'job dating' programme where PhD candidates can talk with different HR consultants (from different industries). More information can be found at:
http://www.english.lunam.fr/content/doctoriales-2012 http://doctoriales.lunam.fr/

· *ABG Intelligence*
They use two training tools: 1) Self–assessment questionnaire (discipline does not play a role) and setting objectives and monitor career progression, with the support of professionals; 2) Valorisation of competences: It is run by an external HR consultancy. Topics: How to communicate beyond academia, identify skills, manage their career more in the longer term.

One important aspect that needs to be considered in any kind of training programme is to **include doctoral candidates' supervisors**. This might be even more essential for transferable skills trainings, as for them the immediate benefit might be less obvious for supervisors. Hence, they would be hardly motivated to encourage the doctoral candidate to invest in such trainings. Unfortunately, in our best practice request no one reported of an institution that structurally involves supervisors in their training programme.

Contact Details

Eurodoc board: board@eurodoc.net Eurodoc representative on 25/04/2012: Anna Tschaut, anni.ts@web.de

Reference

Ateş, G., Holländer, K., Koltcheva, N., Krstić, S., & Parada, F. (2011). *Eurodoc Survey I: The first Eurodoc Survey on Doctoral Candidates in Twelve European Countries.* Brussels: Eurodoc.