

***Building partnerships:
the
inter/multi/transdisciplinary
dimension***

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2019 EUA Annual Conference
“Driving innovation in Europe’s universities”
Paris, 11-12 April 2019



LAB – FAB – APP

Investing in the European future we want

*Report of the independent High Level Group
on maximising the impact of
EU Research & Innovation Programmes*

- The Lamy Group had numerous meetings with ‘innovators’
- Unanimous answers of all ‘innovators’ was that ‘multidisciplinarity’ was the main trigger for ‘innovation’

‘Innovation’ in university settings

How often do monodisciplinary university studies correlate with the ever more present focus on inter/multi/transdisciplinary research?

➤ some challenges

A vast amount of theoretical literature available on the topic

Distinction between **empirical and orientational knowledge**

Empirical knowledge should transform into **orientational knowledge** which is by definition culturally defined and socially implemented.

(Jürgen Mittelstraß (1982) *Wissenschaft als Lebensform*)

(Mittelstraß, J. (1982) *Wissenschaft als Lebensform. Reden über philosophischer Orientierungen in Wissenschaft und Universität*. Suhrkamp Verlag, Frankfurt am Main.)



Equipping cities to weather our changing climate takes many disciplines working together.

How to catalyse collaboration

Turn the fraught flirtation between the social and biophysical sciences into fruitful partnerships with these five principles, urge **Rebekah R. Brown**, **Ana Deletic** and **Tony H. F. Wong**.

Nature, Volume 525, 17 September 2015

<http://www.nature.com/news/interdisciplinarity-how-to-catalyse-collaboration-1.18343>

- A successful endeavor is without a doubt the establishment of the Facility for Advancing Water Biofiltration that brought together in the beginning **more than 20 researchers and PhD students across civil engineering, ecology and sociology at Monash University in Melbourne, Australia.**
- The collaboration between SSH researchers and the engineers involved, provided many challenges in the beginning, but with **very high investments and mutual willingness to understand different methodologies and approaches** to research topics has proven to be more than successful.

- At present, the Cooperative Research Centre (CRC) for Water Sensitive Cities, which developed out of the multidisciplinary endeavor covering both SSH as well a whole range of technical and natural sciences, now comprises a partnership of more than 85 organizations, including 13 research institutions, and around 230 researchers and PhD students from more than 20 disciplines and subdisciplines.
- This very impressive endeavor can be seen as innovation at its best, and has become an Australian export since it has been implemented in Singapore, China and Israel.

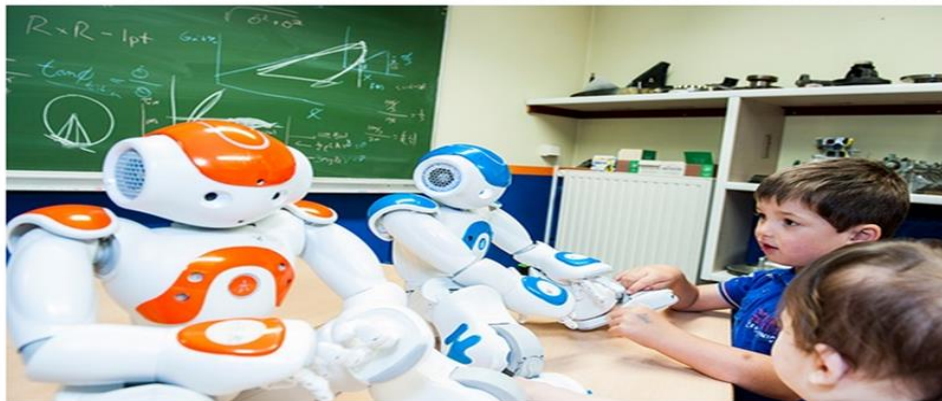


HEALTH ICT

Emotionally literate tech to help treat autism

19 October 2015

by Sophie Hebden



Researchers believe robots can be more effective than puppets and other traditional methods of treating autism. Image courtesy of the DREAM project

Rene at the University of Zagreb

Faculty of Electrical Engineering and Computing (FER)

Faculty of Education and Rehabilitation Sciences
(ERF)

in collaboration with

The Croatian Institute for Brain Research



- Snapshot examples show that the origins of 'innovation' can occur in university settings

- One of the fundamental aims of ‘interdisciplinarity’ should be **raising the awareness of university students to the importance of ‘orientational knowledge’**, that is, making them aware that the knowledge they acquire has a higher dimension, and that the research that they do during university studies is not related only to hardcore facts, but that it should also be viewed in a much wider context



EDUCATION

Academic Year 2017-2018

All programmes

English-language programmes of study

Programmes en français

Programa en español

Archive

Legend:

- ① Required in stage
- ② Optional in stage
- ① First term
- ② Second term
- ①② Both terms
- This year
- Next year
- Alternating years
- ⓪ External
- 📖 Prerequisites
- 👤 Taught by
- 🗣️ Language of instruction
- ⌚ Duration
- = Identical courses

All programmes > Programme > Course of study : Bachelor of Biomedical Sciences (Leuven)

Bachelor of Biomedical Sciences (Leuven) (180 ECTS)

Bachelor of Science

Admission requirements

Programme

This is a translated version of a programme taught in Dutch

Schedule | Stage1 | Stage2 | Stage3

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Expand

180 mandatory credits from Introduction to Basic Sciences (29 credits), Biomedical Research Topics (82 credits), Technical Aspects of Biomedical Research (28 credits), Analyzing and interpreting Scientific Research (11 credits), Human Sciences (11 credits), Elective Courses: Human Sciences (3 credits), Internship (6 credits) and In-depth Elective Courses (Juniortracks) (10 credits).

100% presence is mandatory for all courses existing of exercise sessions, practicals or seminars.

■ Introduction to Basic Sciences

■ Biomedical Research Topics

■ Technical Aspects of Biomedical Research

■ Analyzing and interpreting Scientific Research

■ Human Sciences

11 compulsory credits, 3 chosen credits from Elective Courses Human Sciences = 14 credits in total

4 ECTS	Philosophical Reflection for Biomedical Sciences	①	②	=	E08F3A	👤👤
4 ECTS	Economics	③	②		E08C6A	👤👤
3 ECTS	Perspectives on Religion and Meaning	③	②		A04D9A	👤👤

■ Elective Courses: Human Sciences



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Master's Programme in Biomedicine, 120 credits

Masterprogrammet i biomedicin, 120 hp

Basic programme information

Programme code	4BI11
Name of the programme	Master's Programme in Biomedicine
Number of credits	120 credits (120 ECTS credits)
Starting date	The syllabus applies to students who commence their studies in or after autumn 2011
Decision date	2010-11-09
Decided by	Board of Higher Education
Last revision	2013-12-13
Revised by	Board of Higher Education
Reference number	3-3000/2013
Specific eligibility requirements	A Bachelors degree or a professional degree worth at least 180 credits in biomedicine, biotechnology, cellular and molecular biology, medicine, or the equivalent. And ...

Master's Programme in Biomedicine, 120 credits

[Basic programme information](#)

[Outcomes](#)

[Description of the main field of study](#)

[Content and structure](#)

[Transitional provisions](#)

[Other guidelines](#)

[Study plan with constituent courses](#)

„During the first semester, a course in **biomedical communication** including **philosophy of science** and **bioethics** is given, (...)”

- Humanities and Social Sciences help bridge and combine different ‘cultures of knowledge’
- New ‘networks of knowledge’ are embedded in ‘cultures of knowledge’ in two basic senses:
 - embedded in different cultural, historical, etc. contexts
 - embedded in different scholarly traditions/cultures of disciplines

The challenges in a nutshell

- The need to bridge 'cultures of knowledge'
- **The factor of time** (funders usually do not calculate with the fact that multidisciplinary research takes more time)
- **Time** is also of the essence in the necessary combining of the different cultures of knowledge in university programs – should start as soon as possible

- Such an approach is an excellent basis for 'building partnerships' of **mutual respect**

Thus, one of the fundamental ways of **'building partnerships'** for triggering off environments for 'innovation' are **university settings** both in the sense of research and course programs



THANK YOU!