

Recent developments on the PhD programme on Technology Assessment

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8th Winter School on Technology Assessment

CICS.NOVA, FCSH-UNL

Lisbon, Portugal

Accreditation procedures

- The National Agency for Evaluation of High Education (A3ES) proceeds the evaluation of study cycles, as the PhD programmes
- The process starts with a self-evaluation
 - 2014
- Visits from A3ES to the Faculty of Sciences and Technology
 - Meeting with students
 - Meeting with infra-structures
 - Meetings with teaching staff
 - Meetings with Rector, Dean and programme coordinator
- Contribution from **external entities** relevant to the process

Self-evaluation elements

1. General aims
2. Internal organization and mechanisms of quality guarantee
3. Material resources and partnerships
4. Teaching and non-teaching staff
5. Learning environments
6. Processes
7. Results
8. SWOT analysis to the study cycle
9. Improvement actions proposal
10. Changes to the curricular structure

Former curricular structure

1st year

- Interactive Methods of Participation and Decision (6 ECTS)
- From Analogue to Digital: paths of modern technology (6 ECTS)
- Project I (3 ECTS)
- Option/add-on I (6 ECTS)

- Innovation Economics and Management (& ECTS)
- Decision Support Models (6 ECTS)
- Project II (3 ECTS)
- Option/add-on II (6 ECTS)

Former curricular structure - 2

2nd year

- Methods of Foresight Analysis (6 ECTS)
- Project III (3 ECTS)
- Evaluation in Science and Technology (6 ECTS)
- Project IV (3 ECTS)

3rd year

4th year

- Thesis

The student must start his thesis research since the 1st year.

New curricular structure

1st year

- Interactive Methods of Participation and Decision A (6 ECTS)
- Methods of Foresight Analysis (6 ECTS)
- From Analogue to Digital: paths of modern technology (6 ECTS)
- Evaluation in Science and Technology (6 ECTS)
- Thesis Project I (15 ECTS)
- Thesis Project II (15 ECTS)
- Option/add-on (6 ECTS)

2nd year

3rd year

4th year

- Thesis

The student must start his thesis research since the 1st year.

European Doctorate diploma regulations



- The European Doctorate diploma is approved by the EUA (European University Association) and can be delivered to those that have been approved in the final examination of the PhD programme on TA.
- The conditions for that are expressed in the regulations published by the Universidade Nova Lisbon here:
 - <http://www.fct.unl.pt/node/6911>

External Advisory Board

- **Stefan Kuhlmann** - Professor of Science, Technology, and Society, Chair of Dept of Science, Technology, & Policy Studies (STePS), Faculty of Behavioural, Management and Social Sciences, Institute of Innovation and Governance Studies (IGS), University of Twente, Netherlands
- **Michael Nentwich** - director of the Institute for Technology Assessment of the Austrian Academy of Sciences, and member of the OeAW Commission on Sustainable Mobility, Austria.
- **Pierre Delvenne** - Directeur adjoint du Centre de recherches SPIRAL, Pôle de recherche en Science, Technologie et Société, Université de Liège, Belgium
- **Go Yoshizawa** - Associate Professor of the Graduate School of Medicine, Department of Biomedical Ethics and Public Policy, University of Osaka, Japan
- **Michael Decker** - Head of division II "computer science, economy and society" at Karlsruhe Institute of Technology, Germany
- **Ilona Bučiūnienė** - Dean of PhD Studies, ISM University of Management and Economics, Vilnius, Lithuania
- **Birgit Blättel-Mink** - Institute of Sociology, Goethe University of Frankfurt-am-Main, Germany
- **Andoni Ibarra** - PRAXIS Research Group, University of Basque Country UPV/EHU, Donostia/San Sebastian, Spain

New initiatives

- **Joint Doctorate Initiative (UNL/KIT)**
- **Track on Governance of TA**
- **Track on Health TA**

Joint Doctorate Initiative (UNL/KIT)

- A cooperation protocol between the Faculdade de Ciências e Tecnologia of the Universidade Nova de Lisboa (UNL) and the Institute for Technology Assessment and Systems Analysis of the Karlsruhe Institute of Technology (KIT), was signed in 2008 and it envisaged, among other topics:
 - the promotion of the exchange of post-graduate students,
 - the teaching/research staff mobility,
 - common co-ordination and supervision and
 - the education and science materials exchange.
- This agreement between ITAS-KIT and FCT-UNL defines the conditions and mutual commitment of these institutions in establishing a Joint Doctoral Initiative on Technology Assessment, developed and organized jointly by the parties.

Track on Governance of TA

- From 2017, the PhD programme on TA will have a track on "Governance of TA" with the support of the University of Liège and its research centre SPIRAL (Prof. Pierre Delvenne), the University of Basque Country (Prof. Andoni Ibarra) and the CICS.NOVA research centre.
- The students enrolled in this track should achieve between 20 and 30 ECTS credits of coursework and/or research component leading to the dissertation in one of the collaborative universities.
- Each student will be supervised by advisors from both institutions, who will jointly define and supervise the PhD research project, as well as the educational curriculum.
- After the final PhD examination process, students will obtain one doctoral diploma in the University of origin of the respective Doctoral Programme, with the reference to the Track jointly awarded by ULiège or UBasque Country and FCT

Track on Health TA

- From 2017, the PhD programme on TA will have a track on "Health TA" with the support of the National Institute of Public Health (Dr. José Maria Albuquerque), the Research Centre of the Central Hospital of Lisbon (Centro de Investigação do Centro Hospitalar de Lisboa Central, EPE CHLC) (Dra. Salomé Almeida), the network NOVAhealth (Prof. Pita Barros) and the CICS.NOVA research centre.
- Other agreements are under preparation with Champalimaud Foundation, INFARMED and the McMaster University (Canada).
- The students enrolled in this track should achieve between 20 and 30 ECTS credits of coursework and/or research component leading to the dissertation in one of the collaborative universities or research centres.
- Each student will be supervised by advisors from both institutions, who will jointly define and supervise the PhD research project, as well as the educational curriculum.
- After the final PhD examination process, students will obtain a doctoral diploma with the reference to the Track awarded by FCT.

Finished theses

Title	Author	Year
Technology Assessment and High-Speed Trains: facing the challenge of emergent digital society	Susana Martins Moretto	2016
Decision-making processes based on innovation indicators	Nuno Boavida	2015
Disruptive innovation: Assessment of cloud computing applications	Ana C. Cândido	2015
Electroencephalographic assessment in children with auditive deficits	Isabel Rosa	2015

Theses to be discussed



Title	Author	Status
Decision-making process in radiology: the magnetic resonance example in the TA context	Maria J. Maia	To be finished in 2016
A Constructive Technology Assessment of Stationary Energy Storage Systems	Manuel Baumann	Finished in 2017. Waiting for final discussion
Technology Assessment of the Quality of Magnetic Resonance Imagery	Jorge Moura	To be defined
Bridging present and future of Brain-Computer Interfaces: Assessments of Impact	Gabriel Velloso	To be finished in 2016
Intelligent infrastructures for the road transport system	Tomé Canas	To be finished in 2017
Technology Assessment of Personal Air Vehicles as an Emerging Technology Option for Regional and Urban Transportation System	Abdurrahman Yazan	To be finished in 2018
Additive Manufacturing Technology Assessment: Implications at the Metal Sector	Nuno Araújo	To be finished in 2018
Processes of organization of parliamentary committees for technology assessment	Bernardina Gonçalves	To be defined
Innovation processes in the automotive industry	Rui Guilhoto Loureiro	To be defined
Nanotechnology assessment in the chemical industry	Ana Casaca	To be defined
Health ICT wearables and the future of diabetes management in Portugal	Elisabete Semedo	To be finished in 2019
Maglev technology assessment	Fawaz al-Jobory	To be finished in 2020
	Paulo Madeira	To be finished in 2021
	Carolina Hevelin Moura	To be finished in 2021