

MA in Technology Governance (TG)

Institute of Public Administration

Tallinn University of Technology

The TG program amounts to 120 ECTS credit points and is offered by the Institute of Public Administration at Tallinn University of Technology. Though operating under the umbrella of the faculty of Social Sciences, the institute is considered as an independent centre, where the capacity in terms of teaching and R&D activities has converged and horizontal relationships with actors from different industries and sectors have been established. Although the noted program is one of the 12 programs launched and provided in English at TUT, it is the only one that can be considered as interdisciplinary, covering the fields of public policies, economics and technology in interconnected approach. More detailed overview of the program and teaching staff is attainable at www.technologygovernance.eu.

Technology Governance is an approach and a set of policies undertaken by the public and private sector and society actors in a given space and time to develop a knowledge base, social cohesion and competitiveness at the same time. The provided 2-year master program in Technology Governance is a technology-focused special graduate degree that could be placed in such areas as Innovation Policy, Industrial Policy and Development Economics as realistic alternative to mainstream („Standard Textbook“) Economics. The curriculum includes the theory of uneven development and the history of economic policy. It is open to both Estonian and international students. The language of instruction is English.

The program is designed to provide post-graduate training for students of diverse backgrounds with adequate basic knowledge in economics, history, and technology, which could be equally interesting as first graduate degree or an early- or mid-career professional degree for those working in technology government fields, such as ministries, development and promotion authorities, private companies, and NGOs dealing with the subject matter. As it is offered by the Institute of Public Administration, innovation and technology within noted program are addressed from the perspective of diverse disciplines, including those of economics, administrative sciences, political sciences and history.

The whole curriculum stands on three pillars: **technological development - public policy and institutions - economic development**; aspects that are covered in trans-disciplinary way.

Students will be able to get an insight of „real economy“ and economic and technological capacity of Central and Eastern European countries instead of misleading perceptions presented by „outsiders“. By following comparative study approach, facilitated with an access to empirical data for in-depth studies, students can explain the phenomenon of core-periphery dichotomy in European context whether in terms of diffusion of production and financial capital, national system of innovation or

something else. Our value added lies in the interdisciplinary approach, interweaving of Scandinavian, Anglo-American and Continental schools, and in provision of Eastern Europe specific empirical landscape for research.

The language of instruction of Technology Governance programme is English.

Technology Governance masters studies are administered by the Institute of Public Administration (IPA). Given our active participation in collaborative networks and associations with diverse background, our recent research activities have focused on techno-economic paradigms, financial fragility and development, the characteristics of CEE countries, e-governance, administration and innovation, role and impact of structural funds on innovation, the impact of public procurement on innovation, and economic development and innovation in small states. As academic institution we have a partnership with research centers (PRAXIS), associations of local government, governmental institutions (State Chancellery) etc.

The TG masters program is led by professor **Rainer Kattel**, who has also been the head of Institute of Public Administration since 2004. Professor Kattel has extensive experience in managing Estonian Science Foundation projects as well as international research projects (funded by the European Commission). He is also a member of the social science expert group of the Estonian Science Foundation and represents Estonia's social sciences in the European Science Foundation. His research and publishing activity has focused on areas such as national innovation systems, biotechnology, innovation and development in CEE, development economics. He has also strong background in Philosophy and Classics.

In addition, IPA has a circle of internationally recognized experts in the field, considered as key faculty members involved in Technology Government program:

Wolfgang Drechsler is professor and chair of governance at TUT. One of his main research topics is the role of public management and the state in innovation and economic growth. He also teaches innovation theory and policy at the European Business School in Oestrich-Winkel, one of Germany's top three business schools, and he is in charge of public management in the Lisbon Agenda Group. He just completed a visiting professorship in governance at the University of Erfurt, Germany. Previously he has taught at the University of Tartu, Estonia, universities of Marburg, Geißen and Frankfurt/Main, all in Germany, and as Visiting Professor in Lund, Sweden. He has served as Advisor to the President of Estonia, as Executive Secretary with the German Wissenschaftsrat during German Reunification, and as Senior Legislative Analyst in the United States Congress.

Jan Kregel is professor of finance and development at TUT. He also works at Levy Economics Institute of Bard College and at the Center for Full Employment and Price Stability, University of Missouri, Kansas City. For many years, he was professor and chair of public finance at the University

of Bologna, Italy. He was Chief of Policy Analysis and Development at the Financing for Development Office in UNDESA and High Level Expert in International Finance and Macroeconomics in the New York Liaison Office of UNCTAD. He remains permanent advisor for the Trade and Development Report of UNCTAD, and is a member of the Scientific Advisory Boards of The Italian International Economic Center, Rome, and the *Istituto per la Ricerca Sociale*, Milan, and a Life Fellow of the Royal Economic Society. Kregel is one of the most important post-Keynesian economists. He has held permanent and visiting positions in universities in the United Kingdom, the United States, the Netherlands, Belgium, France, Germany and Mexico. Among his major published works are a series of books in the field of Post Keynesian economic theory, as well as over one hundred and thirty articles published as chapters of edited books and in scholarly journals including the *Economic Journal*, *American Economic Review*, *Journal of Economic Literature*, *Journal of Post Keynesian Economics*. His most recent works on price formation and market structure provide a powerful critique of neoclassical price theory and propose a Keynesian alternative.

Carlota Perez is professor of technology governance and socio-economic development at TUT. Recently, she was a senior fellow at the Judd Center of Management at the University of Cambridge, and she is an honorary fellow of both the United Nations University Intech in Maastricht and the University of Sussex. Professor Perez has invented the concept of techno-economic paradigms and is generally credited as one of the handful of global thinkers on the subject. She is also the originator of the current development strategy of IBM. Carlota Perez has held posts in the government of Venezuela.

Tiina Randma-Liiv is professor and chair of public administration and policy at TUT. For several years, she has been a Visiting Professor at the Catholic University of Leuven, Belgium, as well as at the University of Gdansk, Poland, and now at the Vienna University of Economics and Business Administration, Austria. Professor Randma-Liiv, who previously worked for the World Bank and the Estonian Trade Unions Research and Development Center, is mainly interested in organization theory, management of public organizations, civil service and a special focus of hers is the Administration of Small States. She is a member of multiple national and international advisory councils and boards, including the Steering Committee of the European Group of Public Administration, and founding member of the broadly recognized Centre for Small State Studies in Iceland.

Erik S. Reinert is professor of technology governance and development strategies at TUT. Reinert completed his undergraduate studies at the University of St. Gallen, Switzerland, and has an MBA (Harvard) and a PhD in Economics (Cornell). Professor Reinert is also the Chairman of the Other Canon Foundation (www.othercanon.org), a small center and network for heterodox economics research. His research interests and publications focus around the theory of uneven development and the history of economic thought and policy. As a consultant, Reinert's emphasis is on industrial and economic policy, the preconditions and management of innovations, and the relationship between financial and production capital. His book, *How Rich Countries Got Rich... and Why Poor Countries*

Stay Poor (Constable 2007), has been widely acclaimed to be the main development publication of this year.

Tarmo Kalvet, Dr., is a senior research fellow. In PRAXIS, Estonian leading think-tank, Dr. Kalvet has led numerous policy analysis projects, funded by the EU or other international organizations, with a very strong publishing track record. His expertise includes ICT, e-governance, and innovation policy.

Veiko Lember, Dr. is a research fellow at the institute. His research has focused on management, policy transfer and privatization issues, and he is considered as a leading expert in the field of contracting-out in Estonia.

A number of additional staff will be involved in teaching, indicating to a total amount of approximately **15** people.

Key research milestones:

In addition to individual publications by the key faculty members, Technology Governance program publishes working paper series titled *Working Papers in Technology Governance and Economic Dynamics* (see www.technologygovernance.eu). In the context denoted by the title series, it publishes original research papers, both practical and theoretical, both narrative and analytical, in the area denoted by such concepts as uneven economic growth, techno-economic paradigms, the history and theory of economic policy, and the administration of innovation, but also generally in the wider fields of industrial policy, development, technology, institutions, finance, public policy, and economic and financial history and theory.

The program has also launched its own book series called The Anthem Other Canon Series in 2009, published by Anthem Publishers (London). As „Reality Economics“, the Other Canon reflects the study of the real economy, rather than the behavior of model economy based on core axioms. It publishes both classical and new works in this tradition, such as evolutionary, institutional, and post-Keynesian economics, on the history of economic thought and economic policy, and on technology governance, as well as in the traditions of the German historical school and in the theory of uneven development. The series editors are Erik S. Reinert, Wolfgang Drechsler, Jan A. Kregel, and Rainer Kattel. First books in the series has dealt with Ragnar Nurkse.

Currently, the TG programme is part of one of the leading associations in Europe that provide education (international MA programme) on society, science and technology (ESST – www.esst.eu).

Technology Governance program has established advisory board in order to ensure teaching and research of highest quality. The members of the board are:

Christopher Freeman, University of Sussex, SPRU, United Kingdom, Chairman

W. Brian Arthur, Santa Fé Institute, United States
Wiebe Bijker, University of Maastricht, The Netherlands
Geert Bouckaert, Catholic University of Leuven, Belgium
Ana Célia Castro, Federal Rural University of Rio de Janeiro, Brazil
Martin Doornbos, Institute of Social Studies, The Hague, The Netherlands
Geoffrey Hodgson, University of Hertfordshire, United Kingdom
András Inotai, Hungarian Academy of Sciences
Mary Kaldor, London School of Economics, United Kingdom
Richard R. Nelson, Columbia University, United States
Keith Nurse, University of the West Indies, Trinidad and Tobago
Maria João Rodrigues, University of Lisbon, Portugal / EU Commission
Rajah Rasiah, University of Malaya, Kuala Lumpur, Malaysia
Jochen Röpke, University of Marburg, Germany
Pekka Ylä-Anttila, ETLA - The Research Institute of the Finnish Economy

In study programs, TUT follows standards approved by Estonian authority (Ministry of Education and Science) for higher education studies, including usual European procedures of international accreditation and science evaluation.

Some indication of master's and doctoral theses written at IPA in the field:

Ülle Madise (2007) Elections, Political Parties, and Legislative Performance in Estonia: Institutional Choices from the Return to Independence to the Rise of E- Democracy, PhD thesis
Tarvo Kungla (2007) Patterns of Multi-Level Governance in Europe: The Challenge of the EU's Enlargement, PhD thesis
Anu Veidenberg (2007) Enhancing the Quality of Public Sector e-Services. MA thesis
Kalev Härk (2007) Part of the Local Municipalities in the e-Government Framework. MA thesis
Margit Suurna (2007) The Influence of „Quangos“ on National Innovation Systems – Case Studies of the Estonian Genome Project and the e-Learning Initiatives. MA thesis, *cum laude*
Marius Kuningas (2006) Industry-Academy Technology Transfer – the Case of Estonia. MA thesis.

Some possible thesis topics for prospective students:

- Fiscal policy, budgeting and planning in small states.
- The impact of financial policy on innovation process.
- The risks and benefits of a development strategy based on external financing.

- The impact of technology and techno-economic paradigms on small states (specifically, on education and the university system; on parliamentary elections and the constitutional framework via e- and m-voting and e-governance generally; or on mobility of economic activities (e.g. outsourcing) and company-level strategies).
- The role of the diversity of economic activities and occupations in innovation.
- Small Country 'Squeeze': technology and skills gap between large and small countries.
- The role and the nature of social capital in small states.
- Public-private partnership, procurement and innovation.
- The impact of public sector reform on innovation, R&D and education policies in small states.

The programme provides 2 state-commissioned places for studies, which exempts from tuition fee and enables to apply for a monthly scholarship.

Tuition fee is the same for local and foreign EU students. Tuition fee calculation is based on the number of credit points. 1 credit costs 40 euros. Thus, the tuition fee amounts to 3,000 euros. The cost of elective credits depends on their origin (credit costs vary slightly between different university departments). Living costs in Tallinn are around 4,500 euros per academic year (this includes eating in the university cafeteria and lodging at the university dormitories, transportation & other miscellaneous). Thus, the total cost of studies is about 12,000 (2 x 4,500 + 3,000) euros (plus travel to Tallinn), which is less expensive compared to similar degree programmes in the USA and in other European universities. HOWEVER, it is possible to **graduate within one year**, given that student has previous speciality-related working experience to substitute internship and writes MA thesis during his/her studies, all of which reduces overall costs.

Our program has rolling enrollement, students can apply throughout the year. In addition to standard application documents (http://www.ip.ttu.ee/index.php?lang=est&main_id=5), applicants are requested to submit **CV and 1 page-long description of MA thesis proposal** (the topic, research questions, objectives, methodology etc.). CV and description of MA thesis proposal should be sent to Rainer Kattel via e-mail (kattel@staff.ttu.ee). Please use pdf files.

More information regarding Technology Governance programme, Tallinn University of Technology, and supportive services for international students may be obtained from the following websites:

<http://www.technologygovernance.eu>

<http://www.ttu.ee/?lang=en>

<http://www.campusttu.ee/eng/>

<http://www.ip.ttu.ee/>