

MGT-641(d)

Technology and Public Policy - Technology and innovation policies for grand and global challenges

Foray Dominique

Cursus	Sem.	Type
EDOC General and external courses		Obl.

Language of teaching	English
Credits	2
Session	
Exam	Term paper
Workload	60h
Hours	24
Courses	24
Number of positions	

Remark

Next time: November 19th - 26th & December 7th - 17th 2020 (9.30am - 5pm) For PhD via IS-Academia, for Master students <https://go.epfl.ch/registering-courses-exams>

Summary

This course is about how to structure a policy response to the so-called grand challenges (climate change or global health). It examines mission-oriented R&D programs in various sectors as well as specific policy instruments to learn about the best ways to accelerate innovations in a given sector.

Content

1 - Context, problems

The definition and identification of societal Grand Challenges

Difficulties and problems raised by the Grand Challenges of our time - "the Moon and the Ghetto" argument

The policy debate - sector neutral policy versus sector non neutral policy and the Washington consensus

The need for restoring a non neutral-sector policy approach and the centrality of policy design

2 - Lessons from the past

ICT revolution, life science, agriculture

3 - Policy design

Beyond principal-agent governance and the principle of self discovery

Some specific policy instruments : public procurement for innovation; ex ante prizes

4 - The approach of smart specialisation strategy as an example

The students will have to write an individual term paper on a case of policy addressing a Grand Challenge (preferably within their field of expertise (energy, health, IC, agrofood and water, etc..))

LEARNING OUTCOMES

By the end of the course, the student must be able to:

to understand the centrality of technology policy in order to meet Grand Challenges and to appreciate the role, procedure and design's implications of sector non neutral policies in order to address any Grand Challenge

Keywords

Grand Challenge, smart specialisation, self-discovery

Non neutral sector policy

Resources

Bibliography

Research Policy, special issue, ed. by Foray, Mowery and Nelson, vol.41, issue 10, december 2012; Smart specialisation: opportunities and challenges for regional Innovation Policies, D.Foray, Routledge, 2015; Accelerating innovation in energy, Henderson and Newell, NBER, 2012; The Moon and the Ghetto revisited, R.Nelson, 2010

Ressources en bibliothèque

- [Research Policy \(online\)](#)
- [Smart specialisation / Foray](#)
- [Accelerating innovation in energy / Henderson](#)
- [The moon and the ghetto revisited / Nelson](#)