Summary
The class will provide information about what STI support tools exist and why, will explain the rationales and best practices for STI policy intervention and will provide with a sound understanding of why taxpayer money should be used and how to finance STI activities.

Content
Tentative Outline
1. Introduction [1 hour]
   • a. Motivation
   • b. Definitions
   • c. Group project guidelines

2. Key theoretical concepts [5 hours]
   • a. The Solow residual
   • b. Knowledge as a public good
   • c. Externality
   • d. Market failure
   • e. Paradox of disclosure
   • f. Knowledge spillover

3. Rationales for STI policy [1 hour]
   • a. The neoclassical view
   • b. The innovation system view

4. Principles of a good policy intervention [1 hour]
   • a. A clear “failure” to solve
   • b. No distortion
   • c. Predictability

5. Conducting impact evaluation studies [3 hours]
   • a. Natural experiments
   • b. Matching method
   • c. Difference – in - differences
   • d. Regression discontinuity design

6. What tools exist (and evidence) [5+3+2 hours]
• a. Cluster policies
• b. Public funding of universities and PROs
• c. Grants (universities, companies; individual, collaboration)
• d. R&D subsidies
• e. Tax credits
• f. Patents (external guest: Julio Raffo from WIPO)
• g. Innovation vouchers
• h. Public procurement (external guest: Emilio Raiteri from EPFL)

Note

Target audience
The class is targeted at all EPFL PhD students and post-docs, regardless of whether they want to stay or leave academia/research and regardless of whether they have background training in economic/econometrics. For students who plan to stay in academia/research, the class will provide information about what STI support tools exist and why. For students who plan to leave academia/research to work in policy, the class will explain the rationales and best practices for STI policy intervention. For the other students, the class will provide them with a sound understanding of why taxpayer money should be used – and how – to finance STI activities.

Keywords
Policies for the knowledge economy; Policy evaluation; Science of Science; Intellectual Property; Entrepreneurship.

Resources

Bibliography
Handbook of the Economics of Innovation, Vols. 1&2 (ISBN : 9780444519955);

Ressources en bibliothèque
• The science of science policy / Husbands
• Handbook of the Economics of Innovation vol.2
• Handbook of the Economics of Innovation vol.1

Websites
• https://www.innovationpolicyplatform.org/