

Master's Program in "Science, Technology, Society—Science and Technology Studies"

Science, Technology, Economics

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Course Outline

1. Fundamental concepts

Science, Technology, Technological Change, Entrepreneurial Innovation, Research and Development (R&D), Economic goods and factors of production, Production function, Production Possibility Curve, Economic Growth.

2. Technology, Technological Change and Economic Growth in the History of Economic Thought

Classical Political Economy: Adam Smith, David Ricardo, Karl Marx. Marginalism and Neoclassical School. Post-Classical grand theories: Nikolai Kondratieff and Joseph Schumpeter.

3. Production Theory and Technology: Microeconomic aspects

Production functions, technology, isocosts and isoquants, cost theory and technology, economies of scale. Optimum production level. Competition and Monopoly. Market structure and technology. Innovation and market cycles (Schumpeter).

4. Scientific Knowledge, Markets and Public Policy

Scientific knowledge and markets. Categories of externalities. Public and private goods. Science as a public good. Public Policy: Economics of patent system, tax incentives and subsidies.

5. Economics of Science and R&D.

Human capital. The market for science and scientists. The behavior of scientists. The impact of science on the advance of technology. Efficiency or inefficiency of scientific institutions and markets.

6. Economic Growth and Technological Progress

Main theories of economic growth and technical change.

Main Bibliography

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Ψαχαρόπουλος, Γ. (1999) *Η Οικονομική της Εκπαίδευσης*, Αθήνα: Παπαζήσης.

Primary Sources

Kondratieff, N. (1925) [1984] *The Long Wave Cycle*, transl. by G. Daniels and E. P Dutton, New York: Richard and Snyder.

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Economics Texts

Screpanti, E. and Zamagni, S. (1993), *An Outline of the History of Economic Thought*, Oxford: Clarendon Press.

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