

JOANNIS N. MARKOPOULOS

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Collaboration hours: Thursday 09:00-13:00

(they can change according to the lecture schedule of each semester)

CURRICULUM VITAE (CV)

MARKOPOULOS, JOANNIS : Born October 14, 1948 in Thessaloniki. After the graduation of the German School Thessaloniki (1966, Abitur), Studies in Physical Chemistry and Chemical Engineering at T. U. Darmstadt /Germany (Dipl. – Ing. , 1973), and PhD-Thesis at the Faculty of Engineering, Aristotle University of Thessaloniki (Dr. in Physical Chemistry, 1981). After an academic career at the School of Chemical Engineering of AUTH. (Teaching/Research Assistant 1976-1981, Lecturer 1982-1987, Assist. Prof. 1987-2006, Assoc Prof. 2006-2010, and Head of the Dept. of Unit Operations and Applied Thermodynamics 2006/2007-2008/2009), Assoc. Prof. at the Faculty of Education, School of Primary Education, Dept. of Natural Sciences, Mathematics and New Technologies (2010-2012), and from July 2012 Professor of Technology and Philosophy of Techno-Science at the Dept. of Natural Sciences, Mathematics and New Technologies of the School of Primary Education. Research interests and publications in the fields of Physical Chemistry, Chemical Engineering, and Philosophy and Ethics of Science and Technology. Publications: Seven Books and Book Translations in the fields of Physical Chemistry, Chemical Engineering (3 books of them, in Greek) and Philosophy and Ethics of Science and Technology (2 book translations, also editor, and 2 books – one of them in press 2014), and 40 paper publications in scientific journals and collective volumes, in the fields of Physical Chemistry, Chemical Engineering (23, in international scientific journals, in English), and Philosophy and Ethics of Science and Technology (13 in collective volumes – 5 of them in English and 8 in Greek –and 4 as book reviews, in Greek). Reviewer: Seven international scientific journals in Chemical Engineering, also Member of the Advisory Board, in one of them (1/2006-4/2011).
(Site in Greek: <http://users.auth.gr/imarkopo>)

EDUCATION

- German School Thessaloniki (1966, Abitur).
- Dipl.- Ing. in Physical Chemistry and Chemical Technology, T.U. Darmstadt (1973).
- Dr. in Physical Chemistry, Faculty of Engineering, AUTH. (1981).

ACADEMIC PROFILE

- Teaching/Research Assistant, School of Chemical Engineering, AUTH. (1976-1981)
- Lecturer, School of Chemical Engineering, Dept. of Unit Operations and Applied Thermodynamics, AUTH. (1982-1987).
- Assist. Prof., School of Chemical Engineering, Dept. of Unit Operations and Applied Thermodynamics, AUTH. (1987-2006).
- Assoc. Prof. , School of Chemical Engineering, Dept. of Unit Operations and Applied Thermodynamics, AUTH. (2006-2010).
- Head of the Dept. of Unit Operations and Applied Thermodynamics (2006/2007-2008/2009).
- Assoc. Prof. , Faculty of Education, School of Primary Education, Dept. of Natural Sciences, Mathematics and New Technologies, AUTH. (2010-2012).
- Head of the Dept. of Natural Sciences, Mathematics and New Technologies (2011/2012).
- Prof., Faculty of Education, School of Primary Education, Dept. of Natural Sciences, Mathematics and New Technologies (2012-).

TEACHING

- Mass Transfer (School of Chemical Engineering, obligatory course, 7th Sem.).
- Membrane Separation Processes (School of Chemical Engineering,

- elective course, 8th and 10th Sem.).
- Laboratory: Food and Biotechnology (School of Chemical Engineering, elective course, 9th Sem.).
- Epistemology (Co-lecturer Pericles Pavlidis, Post - graduate course, School of Primary Education, Spring Sem. 2010).
- Introduction to Philosophy of Science and Technology (School of Primary Education, elective course, 1st Sem.).
- Ethics of Science and Technology (School of Primary Education, elective course, 2nd Sem.).
- Contemporary Energy Problems and Sustainable Development (School of Primary Education, elective course, 3d Sem.).
- New Technologies and Contemporary Issues (School of Primary Education, elective course, 4th Sem.).

COURSES CONTENT (SYLLABUS) CONCERNING THE COURSES IN SCHOOL OF PRIMARY EDUCATION

INTRODUCTION TO PHILOSOPHY OF SCIENCE AND TECHNOLOGY (1st Sem.)

Special topics on philosophical thought, epistemology, science and technology in: a) ancient Greek philosophy (pre-Socratics, Sophists, Socrates, Plato, Aristotle, Epicureans, Sceptics, Stoics, Archimedes), b) New Ages (rationalism, empiricism, scientific revolution, classical/Newtonian physics and mechanistic world-view, and c) the modern age (positivism, logical positivism, modern physics, scientific realism, scientism and technocratic world-view, post-modern view of science and technology, unifying function of the philosophy of science and technology.

ETHICS OF SCIENCE AND TECHNOLOGY (2nd Sem.)

The course examines the ethical and moral dimension, as well as the importance of the principles, the norms, the methods, the achievements and the social and environmental implications of science and technology. Moreover, the course is focused on the scientific and moral code of conduct, and on the responsibility of the scientists and the scientific community.

Based on an inquiry of the relationship between techno-science, on one hand, and ethics and a theory of value, on the other, as well as on the most important ethical theories – Utilitarianism, Kantian Ethics, Contractarianism / Contractualism, Virtue Ethics, Moral Rights, Four Principles Theory and Feminist Ethics – and their main principles, the attempt will be undertaken to recognize, evaluate and face concrete environmental and bioethical issues, and to re-establish a unifying view of techno-science with ethical theory and moral practice.

CONTEMPORARY ENERGY PROBLEMS AND SUSTAINABLE DEVELOPMENT (3d Sem.)

The course examines the today's global energy situation – which is still based on mineral fuels (mainly coal, oil and natural gas) –, and the environmental and socio-economic issues, connected with it (air, water and soil pollution, global warming etc.), and advocates the need for a sustainable development. A sustainable model of development is suggested based on elements of: a) Energy saving techniques (transportation, industry, household use), b) Pollution control engineering, and c) New energy technologies (renewable energy technologies): Solar energy collectors, Photovoltaic solar energy, Hydroelectric energy, Wind energy, Geothermal energy, Biomass energy, Fuel Cells, Tidal and Wave energy, Ocean thermal energy. The course, which takes place with the use of slides (transp. membranes), is completed with a critical discussion of the principles and applications of these new energy technologies.

NEW TECHNOLOGIES AND CONTEMPORARY ISSUES (4th Sem.)

A short introduction in the New Technologies, and especially in Biotechnology, Nanotechnology and their achievements as well as their impacts on environment and society – within the context of a more general reference to technological development – is undertaken. A concrete reference on environmental pollution – with the presentation and discussion of elementary environmental chemistry and engineering – as well as on the most important biogeochemical cycles and their human-made disturbance is made. On the basis of concrete bioethical principles, some specific nano-technological and biotechnological issues are analyzed, evaluated and faced. The course is undertaken with the use of slides (transparent membranes).

PUBLICATIONS

- Seven (7) Books and Book Translations in the fields of Physical Chemistry, Chemical Engineering, and Philosophy of Science and Ethics (one of them, in press 2014).
- Forty (40) paper publications in scientific journals and collective volumes, in the fields of Physical Chemistry, Chemical Engineering, and Philosophy of Science and Ethics.