

CORE SCIENTIFIC FIELDS

Corresponding *Obligatory Core Courses* are taught every academic year:

- Introduction to the Sciences of Development and Environment
- Environmental Observation and Monitoring Methods and Techniques
- Environmental Pollution
- Information Systems and Environmental Management
- Introduction to Environmental Protection Technologies
- Spatial, Economic, Social and Legal Dimensions of Development and Environment
- Development Planning Methodologies and the Environment
- Decision Support Systems.



OPTIONAL SCIENTIFIC FIELDS

Corresponding *Optional Courses* are taught if selected by at least 6 Postgraduate Students:

- Aesthetic Dimensions of the Environment
- Clean Technologies
- Dispersion of Pollutants in the Environment
- Environment and Development Policies
- Environmental Economics
- Environmental Fluid Mechanics
- Environmental Geotechnics
- Environmental Impact Assessment in the Urban and Peri-urban Environment
- Environmental Observation and Monitoring Methods and Techniques
- Expert Systems and Multimedia
- Gas Emissions Antipollution Technology
- Groundwater Management
- Hazardous Waste Management
- Industrial Wastewater Treatment
- Mathematical Models in Environmental Problems
- Modern Methods of Management and Protection of the Natural and Built Environment
- New Materials and the Environment
- Pollution Measurement and Monitoring Techniques
- Qualitative and Quantitative Information Management Systems
- Quantitative and Mapping Methods and Techniques
- Recycling
- Renewable Energy Sources
- Soil Remediation
- Solid Waste Management
- Space, Society and Environment
- Statistics
- Survey and Assessment Methods and Techniques
- Urban Wastewater Treatment
- Water Resource Management.

THE PROGRAMME'S SPECIAL SCIENTIFIC & ADMINISTRATIVE COMMITTEE

The Special Scientific and Administrative Committee of the NTUA Interdisciplinary Programme of Postgraduate Studies "Environment and Development" decides on all educational, research, economic and administrative issues relevant to the Programme's planning, function and development, subject to legislation in force and the decisions of the NTUA Senate.

MEMBERS OF THE SPECIAL SCIENTIFIC & ADMINISTRATIVE COMMITTEE

Professor D. Rokos, Programme Director, School of Rural and Surveying Engineering

Professor K. Koutsopoulos, Associate Programme Director, School of Rural and Surveying Engineering

Professor K. Kagarakis, School of Electrical and Computer Engineering

Professor M. Loizidou, School of Chemical Engineering

Professor M. Mimikou, School of Civil Engineering

Professor E. Panayotatou, School of Architecture Engineering

Associate Professor A. Sagia, School of Mechanical Engineering

Professor G. Tsakiris, School of Rural and Surveying Engineering

Professor M. Tsezos, School of Mining Engineering and Metallurgy

CONTACT & INFORMATION

Postal address: Interdisciplinary Programme of Postgraduate Studies "Environment and Development", School of Rural and Surveying Engineering, National Technical University of Athens, Iroon Polytechniou 9, Zografos, Athens, Greece 15780, Tel.: + 210 772 2780, 2776, Fax: + 210 772 2776, 2690, E-mail: envdev@central.ntua.gr

<http://www.survey.ntua.gr/main/studies/environ/envir-g.html>



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NTUA Professors offer their educational and administrative services to the Programme on a voluntary basis.

NATIONAL TECHNICAL UNIVERSITY OF ATHENS

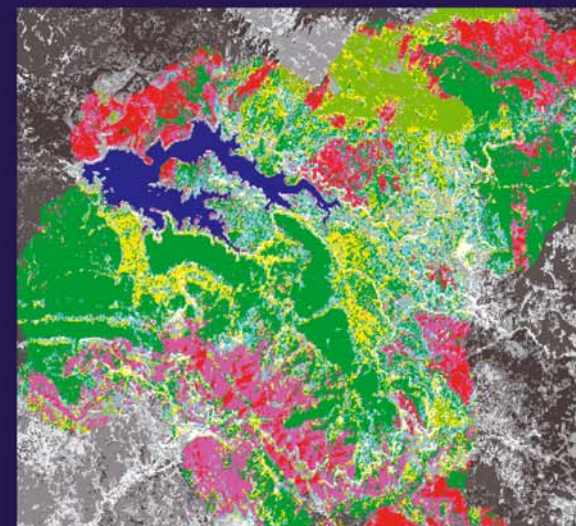
INTERDISCIPLINARY PROGRAMME OF POSTGRADUATE STUDIES



«ENVIRONMENT & DEVELOPMENT»

PARTICIPATING FACULTIES

- NTUA School of Rural and Surveying Engineering (Co-ordinating School)
- NTUA School of Architecture Engineering
- NTUA School of Chemical Engineering
- NTUA School of Civil Engineering
- NTUA School of Electrical and Computer Engineering
- NTUA School of Mechanical Engineering
- NTUA School of Mining Engineering and Metallurgy



PHILOSOPHY OF THE PROGRAMME

Development can only be substantially "**Worth-living**" if it is **Integrated** (simultaneously economic, social, political, technical/technological and cultural), creatively surpassing Sustainable Development in theory and in practice. This is because ideologically, scientifically and at the levels of policy choices, social consciousness formation and relationships and systems of land use, production, distribution, employment and consumption, Integrated Development is pursued with absolute respect to the Natural and Cultural **Environment** and in dialectical harmony with it.



THE BASIC METHODOLOGY: HOLISTIC AND INTERDISCIPLINARY

Despite having contributed to scientific advance until the 1950s, the fragmentation of knowledge into speciality areas, today seems to constitute an important obstacle, especially in the investigation of objectively complicated and multi-dimensional developmental, societal and environmental issues. It is therefore essential to responsibly develop the necessary presuppositions for these issues' holistic and interdisciplinary consideration, investigation, study and confrontation.

OBJECTIVE OF THE PROGRAMME

To contribute to the formation of a common code of communication, as well as of appropriate methods and practices of co-operation among scientists of different specialities, aiming at the integrated and interdisciplinary approach to, analysis and confrontation of today's multi-dimensional and extremely serious Environment and Development issues.



BASIC TOOLS OF THE PROGRAMME

- Systematic interdisciplinary, teaching and research, co-operation and interaction of educators and students
- Interaction of educators with significant experience in each one's specific field, but also, with documented interest in fruitful interdisciplinary co-operation in the investigation of Environment and Development issues
- Utilisation of the considerable specific research, technological and educational infrastructure of the National Technical University of Athens
- Implementation of an internal and external quality monitoring system toward the Programme's continuous improvement.

THE INTERDISCIPLINARY FIELDS OF THE PROGRAMME

1. The integrated investigation, survey, mapping and monitoring of all elements, relationships and interactions of physical and socio-economic reality.
2. The spatial, legal, social, political, economic and cultural aspects of development and environment and relevant planning.
3. The environmental protection sciences and technologies.

Every Postgraduate Student selects a primary and a secondary field of study and research from the above .

POSTGRADUATE DEGREES AWARDED

- Postgraduate Specialisation Diploma (MSc equivalent) in "Environment and Development" (1-2 years)
- Doctor of Philosophy (PhD) degree, awarded by one of the participating NTUA Schools (3-6 years including attendance of the Postgraduate Specialisation Diploma programme).

ADMISSION REQUIREMENTS

Applicants must hold a graduate degree in engineering from the NTUA or equivalent Greek University Departments or an accredited graduate degree in engineering from Universities abroad. Applicants with graduate degrees from other equivalent Departments in Greece and abroad concerned with Environment and Development issues, mainly with a positive or technological orientation, are also accepted. Depending on the applicant's School/Department of origin, the Programme's Special Scientific and Administrative Committee may decide on additional courses which the applicant must attend and successfully complete before entering the Programme.

ADMISSION CRITERIA

The following criteria are considered and collectively evaluated by the Programme's Special Scientific and Administrative Committee:

- the grade of the candidate's graduate degree
- the candidate's performance in undergraduate/postgraduate courses related to the subject of the Programme and in the undergraduate/postgraduate thesis
- the candidate's sufficient and documented computing skills and knowledge of the Greek language and foreign languages
- the candidate's research and professional experience
- letters of recommendation
- conclusions from personal interviews of candidates pre-selected on the basis of the above criteria by the Committee.

PROGRAMME OF STUDIES FOR THE POSTGRADUATE SPECIALISATION DIPLOMA

- Successful attendance of 8-10 courses, of which at least 6 are Obligatory, selected among the 8 Obligatory Courses of the Programme's Core Scientific Fields. The remaining 2-4 courses may be selected among the Programme's Obligatory Core Courses and/or Courses in Optional Scientific Fields. The specific number and composition of the courses required for the Postgraduate Specialisation Diploma are specified annually by the Special Scientific and Administrative Committee, following the evaluation of the Postgraduate Students' background, specialities, related educational needs and the Programme's evolution.
- Preparation and approval of the Postgraduate Thesis.

DOCTOR OF PHILOSOPHY DEGREE

Postgraduate Specialisation Diploma holders may continue their postgraduate studies in one of the participating NTUA Schools toward a Doctor of Philosophy degree. The selection of PhD candidates is subject to:

- the candidate's recommendation by the Programme's Special Interdepartmental Committee
- the candidate's acceptance by the NTUA School concerned.

