

1st DIRECTION OF STUDY

«ENVIRONMENT AND DEVELOPMENT»

Compulsory Courses

- Introduction to the Sciences of Development and Environment
- Spatial, Economic, Social and Environmental Dimensions of Development and Planning
- Environmental Pollution and Protection
- Decision Support Systems
- Environmental Economics

Elective Courses

- Geographic Information Systems and Environment
- Methods and Techniques for Environmental Observation and Monitoring
- Methodology and Methods of Geographical Research
- Ecosystem-based Management of the Environment
- Water Environment and development
- Settlement Organisation and Planning in the Urban and Natural Environment
- Environmental Management and Control - Environmental Policies
- Built Environment and Development
- Waste Management and Materials Recovery
- Water Resources Management
- Energy and Environment
- Clean Technologies
- Advanced Methods of Digital Remote Sensing
- Land Administration Systems and Real Estate
- Application of Environmental Planning to the Built Environment
- Foresight Methods in Spatial Planning



2nd DIRECTION OF STUDY «ENVIRONMENT AND DEVELOPMENT OF MOUNTAINOUS REGIONS»

Compulsory Courses

- Introduction to the Sciences of the Development and Environment - Cadastre and Land Policy
- Geographic Information Systems and Mountain Environment
- Methods and Techniques for Observing and Monitoring Mountainous Regions
- Introduction to the Natural Environment and the Society of Mountain Regions
- Ecosystem-based Management of the Environment in Mountainous Regions
- Water Environment and Development
- Environmental Pollution and Protection
- Spatial, Economic, Social and Legal Dimensions of Development and Environment of Mountain Areas
- Environmental Economics : Applications to Development Issues in Mountain Regions
- Identity and development prospects of mountainous regions



THE PROGRAMME'S SPECIAL SCIENTIFIC & ADMINISTRATIVE COMMITTEE

The Special Scientific & Administrative Committee of the NTUA Interdisciplinary Programme of the 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. NTUA Professors offer their educational and administrative services to the Programme on a volunteering basis



MEMBERS OF THE SPECIAL SCIENTIFIC & ADMINISTRATIVE COMMITTEE

- Professor E. Dimopoulou** Programme Director, School of Rural and Surveying Engineering
Professor A. Stratigea School of Rural and Surveying Engineering
Professor A. Stegou - Sagia School of Mechanical Engineering
Associate Professor N. Mamas School of Civil Engineering
Assistant Professor E. Tsakanika School of Architecture

MEMBERS OF THE COORDINATING COMMITTEE

- Professor V. Tsihrintzis** Programme Associate Director, School of Rural and Surveying Engineering
Professor D. Kaliampakos School of Mining and Metallurgical Engineering
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NATIONAL TECHNICAL UNIVERSITY OF ATHENS



Interdepartmental Programme of Postgraduate Studies

«Environment & Development»

PARTICIPATING NTUA SCHOOLS

- School of Rural and Surveying Engineering
- School of Mining Engineering and Metallurgical Engineering
- School of Chemical Engineering
- School of Electrical and Computer Engineering
- School of Mechanical Engineering
- School of Civil Engineering
- School of Architecture



PHILOSOPHY OF THE PROGRAMME

The philosophy of the Programme is based on integrated development (simultaneously economic, social, political, technical/technological and cultural), creatively surpassing Sustainable Development in theory and in practice. This is due to the fact that 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 of these issues' holistic and interdisciplinary consideration, investigation, study and confrontation.

SCOPE OF THE PROGRAMME

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

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.

BASIC TOOLS OF THE PROGRAMME

- Systematic interdisciplinary, teaching and research, cooperation and interaction of educators and students
- Interaction of educators with significant experience in each of the scientific field, but also, with documented interest in fruitful interdisciplinary cooperation 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 towards the Programme's continuous improvement.

THE 2nd DIRECTION OF STUDY «ENVIRONMENT AND DEVELOPMENT OF MOUNTAINOUS REGIONS»

The 2nd direction of the MSc "Environment and Development" of the NTUA, is the only one that studies mountainous regions in Greece, which cover almost the 70% of the country's total area. It aims at a specialized approach to the problems and opportunities presented by mountain areas. It is based on an interdisciplinary approach, experiential education and offers students the opportunity not only to learn but to live in the highlands. It is held annually in the Metsovion Interdisciplinary Research Center (MIRC) in Metsovo, Greece.



POSTGRADUATE DEGREES AWARDED

The programme awards a Postgraduate Specialisation Diploma (MSc equivalent) in "Environment and Development" or "Environment and Development of Mountain Regions" (2 semesters of taught classes and a semester for the completion of the Postgraduate Thesis).

Successful completion of the Postgraduate Programme's obligations offer the students who wish to continue their studies to be considered for admission for a Doctor of Philosophy (PhD) degree, awarded by one of the participating NTUA.

The selection of PhD candidates is subject to:

- The candidate's recommendation by the Programme's Special Interdisciplinary Committee

ADMISSION REQUIREMENTS

Applicants must hold a graduate degree in engineering from 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 with Environment and Development subjects, mainly with a science 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 the applicant must attend and successfully complete before enrolling to 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 the 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 and foreign languages
- The candidate's research and professional experience
- Letters of recommendation
- Performance at personal interviews of the candidates selected by the Committee based on the above criteria.

PROGRAMME OF STUDIES FOR THE POSTGRADUATE SPECIALISATION DIPLOMA

- Successful attendance of 10 modules.

For the programme "Environment and Development" 5 modules are compulsory core courses and the remaining 5 are chosen by a list of elective courses available to the students.

For the programme "Environment and Development of Mountain Regions" all 10 modules are mandatory.

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 Student's background, specialities related educational needs and the Programme's