

ADMISSION REQUIREMENTS AND APPLICATIONS

Applicants should hold a BSc or BA degree from a recognized university, in agricultural science, biological or environmental sciences or geography, or be able to demonstrate an equivalent level of education in one of these disciplines. Preferably they should have some working experience.

Interpretation of aerial photographs and satellite images is an important part of the course curriculum. Candidates should therefore have good stereoscopic vision as well as normal colour vision.

Proficiency in the English language (minimum requirement Test of English as a Foreign Language (TOEFL) 500, British Council test 6.0 or a Michigan test 75) is also required.

Experience with the word processing package Word for Windows and the spreadsheet package Excel for Windows is an advantage

STARTING DATE AND DURATION

In 1998 the RLE.3 course will start in the first week of September and will last 12 months. The first week is reserved for the introduction and the last week for presentations of final assignment results, clearance formalities and the degree ceremony.

QUALIFICATION AWARDED

After completing the RLE.3 course and passing the required examinations, participants are awarded a Professional Master degree accompanied by a course record.

ACCOMMODATION

Course participants are accommodated in the Dish Hotel. This is situated in the centre of Enschede, a 15 minutes' walk from the ITC building.

STUDY COSTS, SUBSISTENCE AND ACCOMMODATION EXPENCES

The course fees for the 12-month RLE.3 course are NLG 12,000. Additional fixed costs for this course are NLG 4,000. Subsistence, including accommodation is estimated at NLG 1,545 per person per month. Please note that international travel expenses are not included.

FELLOWSHIPS

For RLE.3 course applicants from selected developing countries, the Dutch government awards some fellowships under the Netherlands Fellowship Programme (NFP). In accordance with Dutch government policy, women especially are encouraged to apply. NFP fellowship applications should be submitted through the appropriate organization in the candidate's home country and with the approval of the candidate's employer, to reach the Royal Netherlands Embassy not later than four months before the starting date of the course.

Since the number of NFP fellowships is rather limited, course applicants are advised to try to obtain funding from other donor agencies. Please note that ITC has no funds of its own, nor does ITC have any influence on those organizations that grant fellowships.

FURTHER INFORMATION

The International Institute for Aerospace Survey and Earth Sciences (ITC) is the largest institute for international higher education in the Netherlands. The main objectives of ITC are to assist developing countries in human resources development in aerospace surveys, remote sensing applications, the establishment of geographical information systems and the management of geographical information.

To this end ITC concentrates on three main activities: education/training, research and advisory services. In-house expertise covers an extensive range of disciplines in the fields of geoinformatics, land resource and urban sciences and earth resources surveys. More details on ITC, the courses it offers and their cost are available in ITC's Educational Information brochure. This brochure, application forms and other information can be obtained from:

ITC Student Registration Office
Attn. Mrs. A. Scheggetman
P.O. Box 6
7500 AA Enschede
The Netherlands

Phone: +31 (0)53 487 42 05
Fax : +31 (0)53 487 42 38
E-mail : education@itc.nl
WWW : <http://www.itc.nl>

All ITC courses are regularly revised and updated. The information here applies only to the 1998 course. This brochure will be updated each year and new copies can be obtained from the ITC Student Registration Office.



RLE.3

ITC

PROFESSIONAL MASTER
DEGREE COURSE

RURAL LAND

ECOLOGY SURVEY

1998



The Professional Master degree course in Rural Land Ecology Survey aims to strengthen the capacity to utilize geographical information for natural resource management. The course concentrates on the application of remote sensing and geographical information systems for sustainable agricultural development as well as for conservation of the natural environment and biodiversity resources.

INTERNATIONAL INSTITUTE FOR AEROSPACE
SURVEY AND EARTH SCIENCES

Rapid changes in the vegetation of the earth threaten the provision of mankind's basic needs. Conserving the "green cover" requires adequate information on its state and the way it is used. Remote sensing and geographical information systems (GIS) allow mapping and monitoring of these resources. Decision making aimed at sustainable development and environmental conservation frequently requires integration with other geographical information sources. Spatial modelling, quantified land and habitat evaluation and land use planning are techniques used to analyse such land management options.

The Professional Master degree course in Rural Land Ecology Survey (RLE.3) deals with application of GIS and remote sensing techniques for management of man made and natural ecosystems. The course focuses on the application of geographical information for sustainable development of agricultural lands and semi natural systems as well as for conservation of the natural environment and biodiversity resources.

The course is organized by the division of Agriculture, Conservation and Environment (ACE). The ACE division is responsible for education, research and consultation in the fields of mapping, monitoring and spatial modelling of biophysical data on vegetation and land use in agricultural lands and the natural environment.

Related Professional Master degree courses offered by ITC include forest survey, forestry for rural development, geoinformation for sustainable soil resource management, socio-economic information for natural resource management, geoinformation for urban planning and geoinformation systems for rural and urban applications.

OBJECTIVES

The Professional Master course provides education in the application of remote sensing and GIS for mapping of vegetation and land use with an emphasis on the sustainable development of agricultural lands and conservation of the natural environment. Upon completion of the course, participants should be able to identify the geographical information required for sustainable agricultural development and environmental conservation as well as design, execute and supervise surveys of vegetation and land use. Additional aims of the course are to integrate vegetation and land use maps with other geographical information through GIS models as well as to assess the potential of land for agriculture or nature conservation and develop land use plans. There is ample opportunity to develop skills in remote sensing, processing of satellite and aircraft images and GIS.

TARGET GROUPS

The course is designed for mid-career professionals with an interest in the application of spatial information technology for sustainable agricultural development and conservation of the environment and biodiversity resources. The course is intended for participants with a professional background in agriculture, nature conservation, rangeland and wetland management, landscape ecology, environmental management or related fields. They may be working in survey departments, conservation organizations, rural development organizations and extension services, research institutes, universities and projects.

COURSE STRUCTURE AND CONTENTS OF THE RLE.3 COURSE

The RLE.3 course consists of 10 taught modules each lasting 3 weeks, followed by a final project and personal study topic of 4 months. The following modules are included:

- The first module provides an introduction to *Natural Resource Management* with special emphasis on the complexity of land use planning and natural resource management.
- Ecological concepts relevant for sustainable land management are dealt with in the *land ecology* module.
- Concepts and skills required for working with maps and geographical information are acquired in the *maps and geographical databases* module.
- The *remote sensing* module deals with the use of aerospace sensors to extract information about the surface of the earth.
- Mapping of vegetation in agricultural systems and the natural environment is taught in the *mapping land cover* module.
- The *survey statistics* module provides training in applied statistics for surveying and analysis of geographical data.
- In the *mapping cover related aspects* module the participant learns how to map land attributes associated with vegetation such as agricultural land use, environmental factors and biodiversity.
- The *spatial analysis and modeling* module concentrates on the analysis and modelling of spatial data and digital processing of satellite imagery.
- The *land evaluation* module deals with the assessment of the actual and the potential use of agro-ecosystems and the natural environment.
- The final module provides a multi-sectoral problem oriented approach to *land use planning*.

Application and integration of the skills obtained in the foregoing modules are scheduled during the *final project and personal study topic*. This module results in the submission and defence of a Professional Master thesis. The thesis will be based on field work, typically executed in a tropical environment. It includes the compilation of a land cover map and the elaboration of a personal study topic. In addition during this period several excursions in the Netherlands and North-West Europe will be included.

The RLE course deals with sustainable development and environmental conservation in a variety of ecosystems. The course offers three specializations dealing with:

- agricultural systems
- semi-natural ecosystems such as rangelands
- natural environment and biodiversity resources

Specialized study topics will be organized in a number of modules as well as during the final study topic.

Detailed objectives and complete schedules for each module are given in the RLE.3 course calendar, which can be obtained upon request from the Director of Studies, Mr. K. de Bie (e-mail: debie@itc.nl).