Innovative Postgraduate Education In The Field Of Environment Protection: Methods And Tools

ENV PRO
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APPLIED REMOTE SENSING

Vahagn Muradyan/Lecturer

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GRENA
GEORGIAN RESEARCH AND EDUCATIONAL NETWORKING ASSOCIATION
UNIVERSITY OF GEORGIA
ITM
UNIVERSITÀ DEGLI STUDI DELLA TUSCIA
NAS RA
INTERNATIONAL SCIENTIFIC EDUCATIONAL CENTER
MARTIN-LUTHER-UNIVERSITÄT HALLE-WITTENBERG
TÉCNICO LISBOA
GIRAF PM

Vahagn Muradyan

leading specialist in GIS and Remote Sensing department of CENS NAS RA

PhD in Geography and Associate professor; Research interest; include GIS and RS technologies for landscape ecological analysis, land cover monitoring and modeling, remote observation of environmental compartments (soil, water, plants, climatic condition).

Lead and participate in a number of national and international projects;

Author and co-author of more than 80 research publications;

Google Scholar :https://scholar.google.com/citations?user=hXYjPAAAAAJ&hl=en

Lecturer of the ***"Environmental Protection and Nature Management"*** educational department of the ISEC NAS RA and Gavar State University.

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Course Comparative Analysis

Module _1_ credit _3_

Teaching hours _ 32 _ (lectures: 24, seminars: 4, practicals: 4)

MARTIN-LUTHER-UNIVERSITÄT
HALLE-WITTENBERG

Name: "Applied Remote Senisng"

The Course is aimed to give an introduction to the concepts of optical remote sensing with particular emphasis on the applications in environmental studies using also a number of practical cases.

UNIVERSITÀ DEGLI STUDI DELLA Tuscia

Name: "Principles of Remote sensing and Modeling"

The course is aimed to introduce the theory and applications of spatial analysis, modeling and visualization in landscape analysis, using remote sensing data. During the course students are trained in software familiarization and methods for processing and visualization in scientific work.

- The key point - that the three courses (two in Parner Universities and one to be developed by CENS/ISEC) are master courses.
- Both are using similar set of tools and methods.
- The comparative analysis of both course shows that Program profiles for the partner Universities has basics guiding the development of new proposed course despite the differences, mainly in course load, teaching recourses ECTS, which are conditioned with the specificity of the educational programs of the country.

Course CONTENT

HOURS AND CREDITS

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Course Objectives and Tasks

Module _1_ credit _5_

Teaching hours _ 32 _ (lectures: 24, seminars: 4, practicals: 4)

NAS RA INTERNATIONAL SCIENTIFIC EDUCATIONAL CENTER

Course is aimed at introducing remote sensing fundamentals and applications of remote sensing data to understand, manage and protect Earth resources and Environment.

Course objectives

Introducing the remote sensing fundamentals, including remote sensing data collection and processing, electromagnetic radiation principles and energy-matter interaction, followed by introduction to various remote sensing systems.

Introducing remote sensing data acquisition, storage and processing (pre-processing, processing and post-processing) of imagery, ground truth collection and validation of the results.

Introducing applications of remote sensing technology to understanding, managing and protecting Earth resources and environment (remote sensing applications to soil, water, vegetation, urban landscape studies and monitoring land use - land cover changes and ecological state of agro-ecosystems).

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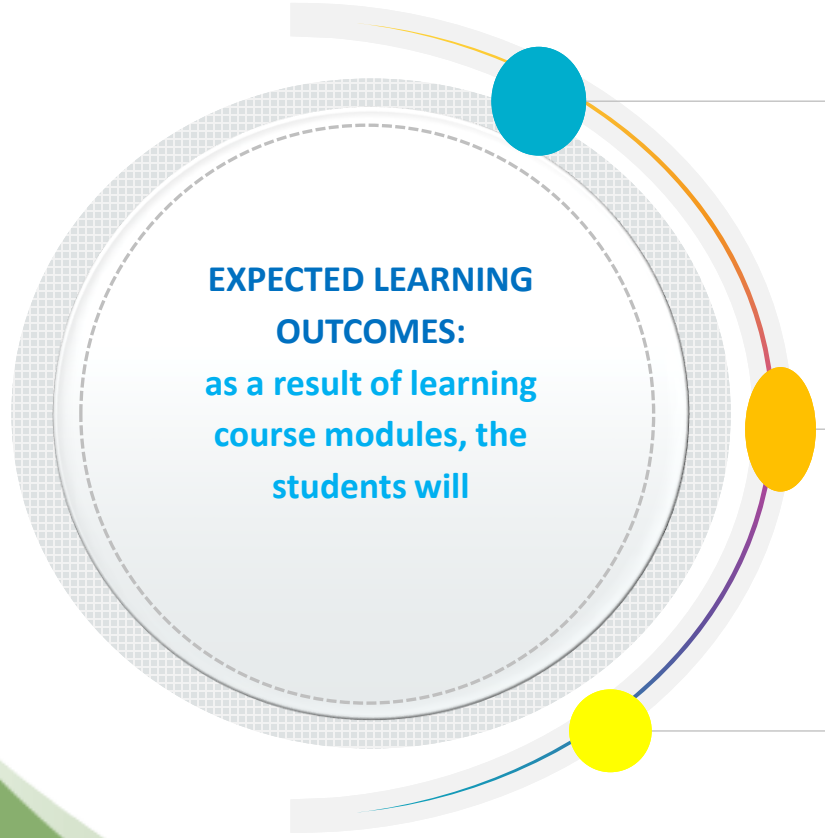
Course Outcomes

(according to the course curricula)

Module _1_ credit _3_



1. **know** the role and significance and advantages of remote sensing technologies in environmental research; the fields of different applications of remote sensing technologies being mainly focused on the differences of land and water remote sensing

2. **be able** to discuss electromagnetic spectrum; to classify optical remote sensing data; to use optical remote sensing data for examining aspects of the environment including water, vegetation, and to monitor land use - land cover changes and ecological state of agro-ecosystems.

3. **master** the modern approaches and methods of preprocessing and processing, analyzing, visualizing remote sensing data.

THANK YOU !

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