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**National University of Architecture and Construction of Armenia, NUACA**

**WP5. Continuing education:**

Regarding WP5 the following newly developed courses of continuing education are developed by the NUACA and ASUE and presented on [https://nuaca.am/](https://nuaca.am/%D5%B4%D5%A1%D5%BD%D5%B6%D5%A1%D5%A3%D5%AB%D5%BF%D5%A1%D5%AF%D5%A1%D5%B6-%D5%A4%D5%A1%D5%BD%D5%A8%D5%B6%D5%A9%D5%A1%D6%81%D5%B6%D5%A5%D6%80) in the section of “Continuing education””

**Course 1**: «**Introduction to Geographic Information Systems**» **(developed by NUACA)**

**Dates and duration**: June 18 – 22, 2018.

**Venue**: NUACA.

**Max-Min students**: 20-10.

**Short Description**: The goals of this course are to teach basic GIS concepts such as spatial data sources and structures, projections and coordinate systems, data editing and creation, and geospatial analysis.

**Lectures and Labs**:

Lecture 1: Introduction, course overview, what is GIS.

Lab 1: ArcGIS basics, loading data, scales, navigation, online help.

Lecture 2: Cartographic principles and conventions.

Lab 2: Making map.

Lecture 3: Spatial data properties and structure.

Lab 3: Attribute query, joining and relating, projection.

Lecture 4: Spatial data management, geodatabase basics.

Lab 4: Create feature classes, vector data editing, geocoding.

Lecture 5: Vector based spatial analysis.

Lab 5: Location query, overlay and adjacency analyses.

Lecture 6: Raster based spatial analysis.

Lab 6: Map algebra, surface analysis, raster-vector conversion, geo-referencing.

Lecture 7: Spatial statistics and geo-statistics.

**Course 2: “Project Management (application in tourism)” (developed by NUACA and ASUE)**

**Credits awarded:** 2-ECTS

**Dates and duration:** 29 may – 4 June, 2018

**Venue:** NUACA

**Max-min students:** 10-35 students

**Short Description**: The course offers the theoretical and practical knowledge and skills how projects in tourism are defined and ultimately translated into manageable project scope. It provides a fundamental knowledge on tourism project scope management, particularly main definitions, how to identify stakeholder needs and convert those needs into viable, measurable project scope documentation, how a project manager can successfully manage a tourism project scope.

**The main Themes:**

**Theme 1**. Introduction to the Course. What is a tourism project management?

**Theme 2.** Common introduction to the Tourism: What is tourism? Who is tourist? Types of tourism projects: local, national, international. Why it is important to understand tourism?

**Theme 3.** How to define the tourists’ preferences. Types of Tourism attractions: physical (tangible) cultural (intangible). Tourism components and motivations. The main definitions and terminology. Service dimensions of Tourism.

**Theme 4.** Collect requirements: work out what project stakeholders want from the project. Categories of requirements: functional and nonfunctional requirements, stakeholder requirements such as reporting requirements, support and training requirements, business requirements, project requirements such as levels of service or quality. How the stakeholders’ requirements collection will be documented.

**Theme 5.** Define scope of tourism project: how the requirements should be turned into a detailed description of the product or service that the project is going to create. Project scope statement to refer during the project. List of what’s in scope of the project and what’s out of scope.

**Theme 6.** How to develop the tourism project concept to ensure the meeting of assessment criteria: how to prepare a detailed scope statement, how to define the project goal, objectives, outcomes.

**Theme 7.** How to develop the tourism project concept to ensure the meeting of assessment criteria: how to create Work Breakdown Structure (WBS) from the scope statement, how to define the project risks, etc.

**Course 3**: **«3D Scanning and Data processing» (developed by NUACA)**

**Credits awarded:** 1,5-ECTS

**Dates and duration:** 23 October – 5 November, 2018

**Venue:** NUACA

**Max-min students:** 10-35 students

**Short Description**: The course presents 3D scanning technology by optical sensors and scanning techniques and shows how to obtain the best results from these technologies. It provides the essential foundation for professionals who wish to get started in the field of new technologies for quality control and advanced metrology management.

**Lectures and Labs**:

* Lecture 1: Introduction, course overview, the main principles of 3D scanning
* Lab 1: Laser scanning systems
* Lecture 2: Laser Scanning in Engineering Surveying: Methods of Measurement
* Lecture 3: Լaser shooting practice and technology
* Lab 3: Presentation of other scanning technologies
* Lecture 4: The influence of the external conditions on the accuracy of laser scanning․
* Lab 4: Collection of 3D scanned data
* Lecture 5: Laser scanning and types of scanners
* Lab 5: Laser scanning systems
* Lecture 6: The main principles of measurement of the 3D scanner
* Lab 6: ranging of errors in laser scan results, Data analyzing
* Lecture 7: The advantages and disadvantages of 3D scanning
* Lab 7: The main principles of measurement of the 3D scanner
* Lecture 8: Data analyzing, Data collection and data quality
* Lab 8: Data Trimble Real Works program
* Lecture 9: Network analysis
* Lab 9: Ground 3D laser scanning, Trimble TX8