Quality Assessment Report

Course: Geomatics and Modelling

**Outline:**

1. **General information**
2. **Assessment objectives**
3. **Questionnaire for students and its results**
4. **Questionnaire for a teacher and conclusions**

**1. General information**

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| Credits | 3 ECTS (optional course), 36 in-class hours |
| Level | PhD students |
| Host institution | Karazin Institute of Environmental Sciences, V.N. Karazin Kharkiv National University, Ukraine |
| E-link: | <https://dist.karazin.ua/><http://intense.network>, <http://ecology.karazin.ua/mizhnarodna-dijalnist/intense-integrated-doctora/> |
| Authors: | **Andrii Achasov** (course coordinator)Anatolii Polevoy |

The course "Geomatics and Modeling" is designed for PhD graduate students, conducting research on "environmental protection". The course is designed to increase the level of knowledge and skills of graduate students in the application of geomatics and modeling in research. The course involves active independent and classroom work with specialized computer software

The course aims to teach PhD students in the methods of geomatics and modeling in the implementation of their specific scientific research as part of the preparation of a doctoral dissertation (PhD).

The brevity of the course "Geomatics and Modeling" presupposes the accelerated integration of knowledge and skills acquired during training at the first or second educational levels. Geomatics and modeling are now used in almost all branches of science and technology.

**2. Assessment objectives**

The assessment was conducted in order to collect the students’ comments and feedback about the course, compare them to the students’ actual achievements, and carefully analyze obtained results to see if the pilot approbation of the course in 2019-2020 and 2020-2021 academic years was positive as well as to see some other changes should be made to the course content or teaching methodology.

Assessment was made by using Google forms as a tool.

**3. Questionnaire for students and its results**

The questionnaire for the students was posted on the web-site of the Karazin Institute of Environmental Sciences (<http://ecology.karazin.ua/mizhnarodna-dijalnist/intense-integrated-doctora/intense-opituvannja/>).

It consists of two sections:

Section A – Overall evaluation of the course.

Section B – Evaluation of the course content.

The questionnaire was anonymous.

Total number of questions – 13.

The assessment was made in February-March 2021.

Number of students – 12.

Below the analysis of the feed-back is presented:

**Sections A - – Overall evaluation of the course**

**1. I was provided with sufficient information about the aims and the content of the course:**

* Absolutely agree –91,7%
* Mostly agree – 8,3%
* Mostly disagree – 0%
* Absolutely disagree – 0%

**2. Assessment criteria were clear and were presented by teacher at the beginning of the course:**

* Absolutely agree –83,3%
* Mostly agree – 16,7%
* Mostly disagree – 0%
* Absolutely disagree – 0%

**3. Assess the level of complexity of this course:**

* The course was too complicated; my personal background knowledge was not sufficient to understand it – 83,3%
* The course was rather difficult, but well developed, allowing me to study it at the required level – 16,7%
* The course was quite easy, though some themes and the way they were taught aroused my interest – 0%
* The course was elementary; most information was familiar to me – 0%

**4. Various forms and methods of teaching were used in this course:**

* Absolutely agree – 58,3%
* Mostly agree – 41,7%
* Mostly disagree – 0%
* Absolutely disagree – 0%



**5. What competences does the course develop?**

* Common – 0 %
* Professional – 41,7 %
* Common and professional together – 58,3 %

**6. What is your overall assessment of the course?**

* Excellent – 58,3%
* Good – 41,7%
* Not good enough – 0%
* Satisfactory – 0%

**Section B – Evaluation of the course content**



**1. What topic was most interesting for you?**

* National geospatial data infrastructure – 16,7 %
* Digital thematic mapping – 0 %
* Models. Information modeling – 0 %
* All topics were interesting – 83,3 %

**2. What topic was most difficult for you?**

* National geospatial data infrastructure – 50 %
* Digital thematic mapping – 25 %
* Models. Information modeling – 25 %

**3. What practical works / seminars were the most interesting for you?**

* All tasks were interesting – 75 %
* Construction of a digital terrain model in GIS – 25 %
* Morphometric relief analysis and three-dimensional modeling in GIS – 0 %

**4. Which tools and learning materials presented in the Moodle do you consider most useful for you in the process of blended learning (concerning this course)?**

* PowerPoint Presentations – 50,1%
* Video lectures – 0%
* Preparation materials for seminars and practical assignments – 16,6 %
* Examples of calculations – 0%
* Tests – 0%
* Reference materials (links to official normative documents and additional literature) – 0%
* Questions for self-control – 0%
* All of the above-mentioned – 33,3%

**5. Does the Moodle platform help to improve the organization and control of the learning process?**

* Yes, it does – 100%
* It does not affect the organization and control of the educational process – 0%

**6. How effective do you think the use of video lectures in a blended learning model is as compared to traditional ones?**

* Very effective, as it allows listening to them at your own pace and several times (if necessary) – 66,7%
* Proved to be an effective substitute for traditional lectures – 33,3%
* Do not exceed traditional lectures in their efficiency – 0%

**7. Does this course require improvement? If so, in what part?**

* Yes, it does – 16,7% (but no other comments)
* No, it does not – 83,3%

**4. Questionnaire for a teacher and conclusions**

The questionnaire for the teacher/course developer (Andrii Achasov) consisted of 9 questions and was filled out after receiving and analyzing student’s feedback.

**1. What is your overall assessment of the course?**

* **Excellent**
* Good
* Not good enough
* Satisfactory

**2. Was the course taught in 2019-2020 academic year?**

* **Yes**
* No

***If ‘yes”:***

1. What modifications were introduced into the course for 2020-2021 academic year?

***During the second year of this course approbation I have included one more topic and added two more presentations in PowerPoint.***

1. Does the revised course contribute to more efficient process of acquiring the competencies provided by the Curriculum?
* **Yes, it does**
* Yes, but not to a large extent
* Efficiency is the same

**3. How do you assess the impact of the online module for self-study on the process of teaching students this new course?**

* **There were significant advantages, including increased interest in the course and the quality of learning in general compared to traditional courses**
* Despite general interest in the course the students did not show due responsibility while studying online module
* The students studied online module with greater interest
* Had no impact (did not differ significantly from traditional courses)

**4. How do you assess the distribution of the number of hours: lectures / practice / seminars / self-study?**

* **Good balance**
* No balance

***If “no balance”, please, explain:***

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**5. What methodological aspects of the new course do you find most useful?**

* Blended learning model
* Support for individual learning paths
* Availability of feedback from students during the course
* **Possibilities of using Moodle tools**

**6. Which tools and learning materials presented in the Moodle were mostly demanded in the process of blended learning (concerning this course)?**

* **PowerPoint Presentations**
* **Video lectures**
* Preparation materials for seminars and practical assignments
* Examples of calculations
* Tests
* **Reference materials (links to official normative documents and additional literature)**

**7. Does the Moodle platform help to improve the organization and control of the learning process?**

* **Yes, it does**
* It does not affect the organization and control of the educational process

**8. How effective do you think the use of video lectures in a hybrid learning model is as compared to traditional ones?**

* Very effective, as it allowed students to listen to them at their own pace and several times (if necessary)
* Proved to be an effective substitute for traditional lectures
* **Do not exceed traditional lectures in their efficiency, but require special conditions and equipment to produce high quality videos**

**9. Does this course require improvement? If so, in what part?**

* Yes, it does.
* **No, it does not.**

***If “yes’, please, give details:***

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**Conclusions:**

The course “Geomatics and Modelling” has received very positive feedbacks from students: overall evaluations: 58,3 % - Excellent, 41,7 % - Good; 83,3 % students liked all topics; and 33,3 % considered all used tools as learning materials as very useful; 83,3% students consider that the course doesn’t require improvement.