



*Final Assessment Report
of the Main Educational Program
on Higher Education*

**MASTER'S PROGRAMME ON
02.04.02 "TECHNOLOGIES OF GEODESY AND
CADAESTRE"**

**People's Friendship University of Russia (RUDN)
AGRICULTURAL TECHNOLOGY INSTITUTE**



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I. Information on accreditation procedure

Subject of accreditation procedure

Educational programme	Degree to be acquired	ECTS	Duration	Form of education	Language of instruction
MASTER IN TECHNOLOGIES OF GEODESY AND CADASTRE	Master	120	2 years, intramurals 2,5 years part-time and extramural	full-time, part time, extramural	Main - Russian

Date of on-site visit: June 07 to June 08, 2018

Panel members:

Tatiana Ilyushina. Academic expert. Full Professor of Geodesy and Cartography, Moscow State University of Geodesy and Cartography.

Anastasia Goreva. Company expert. Project manager at Techno-Cad.

Polina Pilieva. Student Expert. Student of Moscow State University of Geodesy and Cartography.

María Carmen Hidalgo Estévez. Academic expert. Associate Professor of Geology. University of Jaen (Spain).

Jesús Gabriel Moreno Navarro, Academic expert. Full Professor of Geography. University of Seville (Spain).



II. Panel members report

Introduction: aims, structure and general provisions of the accreditation procedure

DEVA and AKKORK (DEVA: Department of Evaluation and Accreditation, Córdoba, Spain; AKKORK: Autonomous Non-Profit Organization Agency for Higher Education Quality Assurance and Career Development, Moscow, Russia), agencies for assessment, accreditation, and control of the quality of education and career development, have signed an agreement on cooperation in international accreditation of educational programs in the Peoples' Friendship University of Russia (RUDN) (Moscow, Russia). To this end, a panel group was created, consisting of two Spanish reviewers (university professors) with the assistance of three Russian reviewers from the academic and extra-academic environment including representatives of the student community.

All members of the group participated in a two-day visit to the university in June 2018. During the visit, meetings and interviews were held with the university's top management, the Dean, students and graduates of all educational programs under evaluation, as well as with employers and with the teaching staff. Earlier, the University had provided AKKORK with a self-assessment report and additional documents, which were later translated into English and forwarded to the agency DEVA and the international members of the reviewers' committee. The evaluation of educational programs by the reviewers is based on the provided written material, the additional documents provided on request, and the results of the visit.

Review of the institutional profile of the Peoples' Friendship University of Russia (RUDN)

Russia joined the Bologna process in 2003 and since then has consistently adhered to the basic objectives of the Bologna Declaration at the national and institutional levels. Part of this process was the introduction of a two-cycle system of education at the national level in accordance with the "Framework for Qualifications of the European Higher Education Area". The program for the first cycle usually last 4 years and graduates acquire a bachelor's degree. The second cycle includes two years of study and ends with a master's degree. Graduates can later continue their education to pursue a PhD (PhD - Doctor of Philosophy), and then the Doctor of Sciences. It should be noted that the Peoples' Friendship University of Russia (RUDN) is a pioneer in the introduction of the Bologna process in the educational system of the Russian Federation.

Federal state educational standards define the learning outcomes of each educational program at each level of qualification. The structure and content of the curriculum depends largely on the requirements of the Ministry of Education and Science of the Russian Federation.

All bachelor's and master's programs consist of several modules, that is, courses from different disciplinary areas. The educational programs do not focus only on a specific educational area, but offer more general education, such as the humanities and the social sciences. This is especially true for bachelor students.



Peoples' Friendship University of Russia (RUDN) was founded on February 5, 1960 by the decision of the Government of the USSR. On February 22, 1961, the University was named after Patrice Lumumba - one of the symbols of the struggle for the independence of the peoples of Africa. The Russian language classes at the preparatory faculty for foreign students began in 1960, and at the six basic faculties of the University (Engineering, History and Philology, Medical, Agricultural, Physical, Mathematical and Natural Sciences, Economics and Law) - on September 1, 1961. In 1964, the University became a member of the International Association of Universities (IAU).

Nowadays, the structure of RUDN comprises 5 main faculties: Faculty of Physics, Mathematics and Natural Sciences, Faculty of Ecology, Faculty of Philology, Faculty of Humanities and Social Sciences, Faculty of Economics, Engineering Academy; and 10 institutes: Medical Institute, Law Institute, Institute of Foreign Languages, Agrarian-technological Institute, Institute of World Economy and Business, Institute of Hospitality Business and Tourism, Academic Research Institute of Gravitation and Cosmology, Institute of Medical and Biological Problems, Academic Research Institute of Comparative Educational Policy, and Institute of Space Technologies.

The distinctive features of the educational process at RUDN are:

- ECTS Credit system.
- European Diploma Supplement.
- Worldwide academic mobility.
- Teaching in foreign languages.
- Up to 800 academic hours of foreign languages learning.
- Diploma in translation (2-3 foreign languages).
- Over 1500 courses for continuing education.
- All levels of education (master, PhD, DSi, Clinical residency, internship).

RUDN has the right to set its own educational standards (sanctioned by Russian President, 2012).

The University has a team consisting of more than 5,000 employees, among them - about 2,500 teachers, including 500 academics and doctors, more than 1,200 professors and candidates to doctor of science, 57 full and correspondent members of the Russian Academy of Science and field-specific academies, 28 Honoured Scientists of Russia, 26 full members of foreign academies and scientific societies.

The educational process and research activities of the University are supported by sufficient infrastructure, material resources and technical equipment. For example, the following indicators can describe the fully computerized library of the RUDN:

- Library branches and reading halls in 5 University buildings
- More than 17,000 users
- 1 800.000 copies and library items at the library stock
- Online access to more than 36 foreign & Russian databases
- 90 000 foreign literature pieces in 70 languages
- Electronic collections of RUDN professors' publications
- University has 45 educational and scientific centres, 150 scientific laboratories.



The outcome of the work of professors' and researchers of RUDN includes: 870 copyright certificates, 160 patents of the Russian Federation and 2 scientific inventions, and 84 certificates for computer programs and databases (RUDN intellectual rights).

According to international ratings, RUDN is included in the World Top-500 in the QS World University Rankings. In 2011-2014, in the annual National universities, Interfax and Echo proposed an assessment of Moscow RUDN in a ranking of 4-6th among all Russian universities, and the most internationalized university.

III. Introduction: aims, structure and general provisions of the accreditation procedure

Albeit, currently, there is not an internationally agreed protocol for assessing the quality of the higher educational degrees, it seems appropriate to employ criteria roughly analogous to those that would apply if the evaluated institution were located in the same country as the agency. Therefore, the seven criteria used in this report correspond, with some necessary adaptations, to the structure of the Quality Handbook elaborated to that effect by the Andalusian Agency for University Quality Evaluation and Accreditation (DEVA). Specifically, this evaluation process relies on the last edition of the "Guide for Renewing the Accreditation of University Bachelor's and Master's Degrees in Andalusia".

For each of these seven criteria, one of four possible ratings was chosen, namely:

- "Fully conform",
- "Substantially compliant",
- "Partially compliant", and
- "Not compliant".

As applied here, the latter implies very serious shortcomings and might, depending on the criteria in question, originate an unfavourable overall assessment. A rating as "Partially compliant" implies some shortcomings, sometimes severe enough to demand changes in some aspects of the educational process. A "Substantially compliant" rating implies a satisfactory situation; however, there may be some, or even considerable, room for improvement. "Fully conform" corresponds to excellent quality. Therefore, whatever the rating chosen for each criterion, the stakeholders are encouraged to pay close attention to the provided comments and recommendations.

IV. Overall assessment

Comments

After studying the self-assessment report, a vast range of internal documents, and holding extensive on-site meetings with the program's administrators, management, teaching staff, students, graduates and employers, as well as with staff of RUDN's quality management, the Panel has a favourable opinion about the quality of the program.

The Panel also wants to underline the commitment of RUDN to quality, evaluation, and internationalization. This is a clear strength. The same applies to the study plan, to the



equipment, and to staff skills and qualifications. The Master's Degree in Technologies of Geodesy and Cadastre presents excellent indicators of professional projection, guaranteeing a future demand and technical evolution of its own technical resources.

This Panel wishes to take part in the improvement of this degree in Technologies of Geodesy and Cadastre making suggestions and recommendations for the degree to reach excellence standards.

The professional Master degree programme "Technologies of Geodesy and Cadastre" competes with other institutes in specialty "Land Use and Cadastres" and is open to the advanced technologies widely used in various production projects of the leading organizations in geodesy support, cartographic feasibility demonstration, cadastral activity and land use in the Russian Federation at the moment. The programme necessity and efficiency are justified by high demand in specialists in GIS technologies, geodetic support, and land use among foreign and Russian state and private companies. The programme is in constant demand not only among the Russian applicants, but the foreign ones as well.

The programme is designed to promote for students' mastering of professional competencies on the basis of the national and foreign experience and the modern science. The management of the Department and Faculty of the RUDN has established active cooperation with the professional community representatives (geodetic survey firms, cadastral and land use organizations, etc.).

Assessment: SUBSTANTIALLY COMPLIANT

V. Assessment of key quality criteria

CRITERION 1. AVAILABILITY OF PUBLIC INFORMATION

Comments

The information about the Master in Technologies of Geodesy and Cadastre is public on the website of RUDN and at the web page of the Agricultural Technology Institute (ATI), so, a priori, it is accessible to all stakeholders. However, there seems to be a duplication in the websites, since an older and most extensive website (<http://www.rudn.ru/>) seems to co-exist along with another in more current style (<http://www.rudn.ru/ab/>). Despite its updated aspect, the latter appears to be incomplete, with many sites/links still under construction. In addition, these two websites have different structures and are inter-linked in some areas, making it more difficult to find information.

The problem of duplication on the web pages also appears in the case of the specific information about the master in Technologies of Geodesy and Cadastre. This can be found at <http://www.rudn.ru/ab/?pagec=5010> if accessed via <http://agro-rudn.ru/>. If the access is from another website of the ATI, in <http://web-local.rudn.ru/web-local/fak/rj/index.php?id=5>, the information can be found at <http://web-local.rudn.ru/web-local/fak/rj/index.php?id=5>.



local/kaf/rj/index.php?id=170&p=4660, after selecting the Department of Agro-engineering and then master's degree courses. While the contents differ in both pages, main qualification's identifying details can be found in both websites, including a description of the educational programme and a table with the curricular structure. However, none of the two sites include accesses/links to other relevant content of the curriculum, as table of subjects, teaching coordination, and access to the teaching guides.

Information on international mobility and cooperation accessible on the web is very scarce and appears on the general entry page of RUDN. European Diploma Supplement is issued by RUDN, as it is clearly stated in its website, although the diploma issue procedure is not easily available.

According to the self-assessment report, the programme has an internal quality assurance system that involves students, teachers and employers. Results from a survey carried out in 2017 in Land Management and Cadastres showed that the students are mostly satisfied with their field practice. In addition, the percentage of graduates employed in the respective field is over 90%. This information does not seem to be available, however, on the website.

On the other hand, the job portal for students and graduates appears to be very well structured in one of the websites of RUDN, with links to the professional and academic guidance services, information on partners and teaching staff linked to enterprises, and promotion of the youth employment, among others. In the case of the procedure for making suggestions and complaints, information is available in both RUDN's and ATI's websites. The structure and links are quite clear and user-friendly.

The members of the Panel agree that public information can improve a lot in content and format. In fact, the Panel found that students know the Master mainly through personal and professional contacts connected to the staff involved in the curriculum. This networking reveals the excellent relationships between the professional environment of the cadastral geodesy and the academic staff of the Agricultural Technology Institute. However, to be accessible, public information requires nowadays visibility in the web. In this respect, the information appears almost entirely in Russian, which is not a problem when it is in html format.

Recommendations

RECOMMENDATION 1.- The web pages of all degrees must follow the same standards and facilitate online translation. When the information is not in English, similar templates and HTML formats should be used, instead of PDF and DOC. Html format allows automatic translation and this is crucial when information is not in English.

RECOMMENDATION 2.- It is recommended a complete review of the information available on the web, with a structure that integrates the description of the educational program: syllabus of all subjects, teachers, and schedules. Information on the structure of the program (compulsory and optional credits, list of basic and elective courses, external practice, graduate qualification work, teaching guides...) should be more visible in the Master's website. The design and contents of the page should be included as a basic part of the master's development strategy and quality system.

RECOMMENDATION 3.- It is recommended that the syllabus of the different subjects should



be published sufficiently in advance so that potential students can have a good knowledge of the subjects that will be taught.

RECOMMENDATION 4.- Information about the faculty on the web page should be more easily available to prospective students.

Assessment: PARTIALLY COMPLIANT

CRITERION 2. QUALITY ASSURANCE SYSTEM

Comments

The Panel was impressed by the rigor and commitment of RUDN to evaluation and quality control. The resources and effort used by RUDN to achieve competitive standards are evident. There is an open attitude to receiving comments from stakeholders.

Filling the satisfaction surveys is mandatory for the students.

RUDN has a policy for quality assurance that is part of their strategic management. The quality policy and the internal bodies and management of quality assurance were formally established by a Rector's Order on November 3rd, 2010 through the document *Quality assurance regulation on the organization and conducting of educational and work practice of the RUDN students*. More recently, a *Reception and consideration of appeals (complaints, applications, proposals) of students, employees of the University and other citizens to management of* · has been settled by a Rector's Order (18 January 2016).

The internal quality assurance of RUDN is settled in the Document Management of Education Quality System (EQS), which was approved in 2012. The documented procedures deal with the document and data management, internal audits, control of non-conforming product and correcting and preventive actions. Those procedures are written in accordance with the requirements of ISO 9001: 2008. RUDN Organization structure is also established and documented.

The implementation of the EQS procedures is carried out through various fundamental activities according to (1) the development of the training program (2) the collection of data and opinions on the development and results of the program (3) the analysis of data collected and identification of non-conforming product (4) the elaboration and development of improvement plans and (5) the revision of the fulfilment of the improvement plans. More information on the tools used to solicit input from stakeholders (teachers, students, graduates or employers) would help to improve the transparency of the EQS procedures.

Process, resources, performance or employment indicators are the main visible products of the EQS implementation. Some indicators are collected centrally but quality specialists at the departments collect most of them. Then all indicators are normalized and on the basis of normalized indicators, quality diagrams are constructed for the university as a whole for each core educational unit (CEU) in each direction and specialty. The comparison is also made with the target set annually and with the lower limit established. The presentation of the results through tables and comparative graphs are adequate to show the results of the programs.



However, written reflections from the tables and graphs would help to know how deans or department heads and their teams value the results and interpret them.

At the university level, the quality strategy program, its development and implementation are perfectly described in the self-assessment report. Both the information provided by the self-assessment report and the information available on the teaching quality website demonstrate the high level of implementation of the quality system. It is worth mentioning the easy access to the different monitoring and improvement mechanisms, as well as the public information on the organization, functioning and feedback of the different quality committees of the RUDN.

Specific information available on the ATI public website about the quality system is located within the page dedicated to the students. This link includes information on the Education Quality Student Committee, its structure, and mechanisms for managing the demands of the students. However, in the case of the Master's web page, the link to the Quality System has no contents.

Evidences of specific initiatives for quality improvement stemming from analysis and review of the results of the Quality Assurance Program are not available in the self-assessment report. However, global surveys to students and teachers, to assess the satisfaction with the education quality are carried out at the RUDN level every three years. Apart from global surveys, surveys to students, to estimate the quality of instruction in a certain subject/module can be carried out at the faculty level. The respective programs are amended as agreed during the discussion of the results of the survey.

Recommendations

RECOMMENDATION 5.- It is recommended that the information concerning the quality committees be updated on the ATI website. A link to the procedure of the program-specific internal quality system should be included on the website of the Master.

RECOMMENDATION 6.- It is recommended that specific information corresponding to the Improvement Plan be included in the Master's web page.

Assessment: FULLY CONFORM

CRITERION 3. DESIGN, ORGANIZATION AND DEVELOPMENT OF THE PROGRAM

Comments

This section includes sub-sections, considering the aspects in which the master planners have focused their efforts. The Panel has taken into account this vision to carry out the evaluation:



Programme Launch and Programme Website

The information appears on two websites with different structure and none of them is complete; not all subjects are presented and their contents are incomplete. However, the personnel interviewed did not see this as a problem. This may be due to the lack of use of this platform and its irrelevance in the development of the program, which seems to acquire its condition of excellence with conventional means. It seems that the web was designed to fulfill a requirement rather than as a mean for the development of the program.

The information about the program at the Master's website, mentioned in the self-assessment report, is quite limited. The suggested link corresponds to the main entry page of RUDN, where the user can access the master programs menu and then the master of Technologies of Geodesy and Cadastre website. The information included in the menu on the left is common to all master programs at RUDN. It basically deals with conditions for access to the master degrees and the procedure for admission, so it does not provide specific data related to this Master.

Detailed information on the design of the Master appears in the menu on the right and consists of a document on the development of the educational program and a table with the temporal structure of the curriculum. There is neither supplementary information about the contents of the subjects nor an updated design of the Master. The students do not know the program until they have enrolled and have dealt directly with the teacher.

Programme Development Strategy and Quality System Reports

In light of the results, the strategy followed has certainly been successful. The program seems to be very focused towards a specific professional profile with great demand in the geographical areas of origin of the students.

Uniqueness

Certainly, the specificity of this curriculum makes it unique. It is noteworthy that the personnel interviewed had no knowledge of other masters whose programs could be similar or with the same purpose. Even though it is an innovative and complete program, the lack of relationship with other academic areas that work in the same sector, may prevent a larger scientific growth.

The specific and unique nature of training in the Master's degree programme "Technologies of Geodesy and Cadastre" which is taught at the RUDN Agrarian and Technological Faculty is in its practical orientation that is represented by:

- 1) Close connection of the educational process, science and real production.
- 2) The unique labs with up-to-date equipment are involved in the educational process: The Unmanned System and Operational Cartography Centre, The Experimental and Technological Laboratory of Land Remote Sensing and Monitoring, The Land Cadastral Valuation Laboratory, etc.
- 3) Practical exercises in special disciplines are held in the partner organizations: Dokuchaev Soil Institute, RAS Geophysics Centre, Association of the Russian Appraisers, All-Russian Research and Scientific Institute for Civil Defense and Emergency Situations, Vid Project Company, GeoProfi Company, etc.
- 4) Specialized department created in "Moskovsky" Standardization and Environmental Monitoring Centre provides the students with the possibility to participate in real production projects in Moscow region.
- 5) The curriculum for this program includes the disciplines embracing the training module, implemented jointly with "Roskosmos", students have the opportunity to exercise on the unique equipment of the Training Center for Flight Control of RUFN-CSRITE (RUDN-TSNIITMASH). As part of the master's program at the Center for unmanned systems and



operational cartography, the students take a specialized course on unmanned aerial vehicles operation and use for the operational monitoring of land resources.

Competences to be Developed

After the interviews with the employers and the graduates, it was possible to confirm a high degree of feedback and application of the necessary information to define the competences. The Panel has verified the acquisition of competences by the graduates and their suitability for the labour market.

Updating Procedure

As in the previous point, the Panel has confirmed a high degree of efficiency in the contents updates, therefore the procedures are validated.

Admission and Transfer Procedures

The Panel has confirmed that there is a rigorous evaluation system for admission to the study plan. The requirement of the subjects is high and a high degree of qualification is required to pass the entrance exam. This matter received considerable attention by the Panel in the interviews with students and graduates.

Ensuring Equal Knowledge in First Year Students

Two main resources are offered for the adaptation of the new students, a tutor who advises them and the information available on the RUDN website. The Panel considers that they are adequate resources, despite some reservations about the quality of the web information.

Individuals with Health Impairments

The Panel did not interview any person with health impairments. No specific facilities for the disabled were found.

Head of the Programme

According to his CV, the Head of the Program is specialized in Geodesy, a discipline in which he has abundant quality publications and a continuous scientific production.

Supervision of Practice/Internship and Graduate Qualification Works

The Head of the Program is responsible for the general coordination of activities. Graduate qualification work mentors are appointed based on the professional and scientific interests of the students and teachers, and the appointment is discussed at a department meeting. The dissertations provided to the Panel maintained scientific standards, although their structures differed greatly. The cartographic edition, as well as graphs, tables, etc., showed that the students had availability and adequate means for its elaboration.

Internationalization

The term "international" refers almost exclusively to the CIS and non-CIS countries, giving a glimpse of a territorial vocation over a specific sphere of relationship. The Panel thinks that the scientific level found in this curriculum is worthy of a wider dissemination, considering the term "international" in all its semantic spectrum. None of the graduate students used English with the members of the Panel, despite having that language as a priority in their language training.

Among the skills that students lacked at the beginning of their work, there was knowledge of the 1C program, economic assessment, legislation and regulatory support in the field of the real estate and land management state cadastre.



Recommendations

RECOMMENDATION 7.- It is recommended that the rules for the preparation of Master's dissertations be available on RUDN's website. Also the Master's website should include references to the administrative management procedure of external internships and final dissertations.

RECOMMENDATION 8.- It is recommended to establish a program of invited lectures and seminars by foreign professors from prestigious institutions. This possibility is mentioned briefly in the self-assessment document (key programme).

RECOMMENDATION 9.- The use of English should be encouraged as a working tool for the students, not only as a subject of study.

RECOMMENDATION 10.- For the teaching process it is very important to have a practicing lawyer's knowledge applying the legislative, methodological and regulatory base on the federal and regional levels that regulates and governs the land management and cadastre. Currently, cadastral specialists are in demand on the labor market. However, there are very few specialists in the field of land law who have experience in practical projects. The department needs such specialists. It is recommended to strengthen the existing master's program with: knowledge of regulatory legal sources regulating the status and circulation of both land and real estate; legal status features of the land; the basics of state regulation of land management and cadastre; the general schemes of land and real estate transactions. With the aim of free orientation in the legal framework governing the circulation of land and real estate; the classification of objects of industrial, commercial and residential real estate, as well as land sites, and rules, features and principles for their assessment; housing construction of land in state or municipal ownership; land site selection for construction; land site allocation standards; the procedure for granting the state-owned or municipal-owned land plots to citizens; reassignment of land rights upon transfer of ownership of a building, structure; acquisition of rights to land plots, which are in state or municipal ownership and on which buildings, structures are located; the auction organizing and conducting procedures for the sale of state- or municipal-owned land plots; the peculiarities of a state- or municipal-owned land plots lease agreement for following housing construction; peculiarities of the land rights assurance in case of the land acquisition, consideration of land disputes, etc.

RECOMMENDATION 11.- Expand knowledge of cadastral activities and responsibilities of cadastral engineers in order to increase the ability of students during the work at an enterprise to correctly arrange a cadastral file or a land management file, an agreement for the implementation of the transaction with the land plot and real estate; documents for the assessment of land, real estate, transactions with land and real estate, the implementation of state registration of rights to a specific property and real estate management.

RECOMMENDATION 12.- It is recommended to pay more attention to the study of methods and practical activities of real estate evaluation.

Assessment: SUBSTANTIALLY COMPLIANT



CRITERION 4. ACADEMIC FACULTY

Comments

Information on the profile and global distribution of the professors and lecturers for this Master has been included in the self-assessment report. The teaching staff consists of experienced professionals, with a total of 17 teaching staff (eight full-time and nine part-time). Most of them are professors and associate professors with more than six years of teaching and research work experience.

According to the self-assessment report, the teaching staff's basic education corresponds to the subjects that they teach, and they regularly publish in scientific journals. According to the self-assessment report, the total workload of the program is 58 credit units, distributed among the 17 full-time and part-time teachers. In addition, nine out of the 17 participate in the graduate qualification work supervision, and eight of them are currently supervising students' internships. In relation with the quality of the teaching staff, the self-assessment report states that all teachers take on a regular basis advanced training both in the sphere of their professional interests and in teaching. During the meeting with the teaching staff, they also mentioned the possibility of attending upgrading specialized courses: if they justify to RUDN the need of a specific formation, the university could authorize and fund the course.

Although there is not specific information about students' satisfaction with the teaching activity of the academic staff of the program in the self-assessment report, the Panel had the opportunity of talking about this aspect during the meeting with the students on June 7th. All the students were fully satisfied with the teaching activity: they emphasized the high degree of compromise of the teaching staff with the Master program, as well as the advantages of receiving an individual and personalized attention from the professors.

The key documents regulating the minimum requirements for teaching positions at RUDN and the selection criteria of teaching staff candidates are mentioned in the self-assessment report and can be found at the university web page.

The process of assignment of Master's dissertations is also well described, mentioning both the criteria and procedure applied. In relation with the profile of teaching staff who supervise these Master theses, and according to the tables included in the self-assessment report, only two of the seven teaching staff supervising the graduate qualification works are full-time employees. This has been considered as a strength by this Panel, given that part-time professors are active professionals, which contributes in a positive way to the applied profile required by this kind of Master program.

There is no specific information in the self-assessment report referred to the students' satisfaction with the procedure used for choosing topic and carrying out the graduate qualification work. Nevertheless, after meeting the students, it is worth mentioning that they are very satisfied with the possibility of suggesting and selecting a topic of their personal interest.

The self-assessment report does not include specific information about the management of external internships and the students' satisfaction with them. However, those assisting to the meeting with the Panel indicated that they have the opportunity of applying according to their own personal preferences. They also mentioned the great effort of the teaching staff in order to satisfy their requests in this respect.



Overall, the teaching staff consists of experienced professionals, with long teaching and research work experience.

Recommendations

RECOMMENDATION 13.- It is recommended that additional information on the management of external internships be provided in the Master's web page.

Assessment: FULLY CONFORM

CRITERION 5. INFRASTRUCTURES, FACILITIES AND RESOURCES

Comments

The buildings visited are in good maintenance condition despite the age of the facilities. There are some improvisations in electrical installations that affect safety more than functionality. The elevators do not have enough capacity for the flow of people who are supposed to work in the facilities. It is usual to use stairs to go several floors up.

The library and computer rooms are very accessible and well equipped. Library resources and services are well documented, showing a high level profile for both aspects. The catalog of printed and electronic editions, the provision of databases, and the electronic access systems are worth mentioning.

In the case of computer equipment, attention is drawn to the permanence of the Windows 2000 operating system. The Panel assesses this circumstance as a concern for the proper functioning of the software in the face of updating and relying on more expensive and difficult-to-maintain operating systems. This operating system coexists with the latest versions of windows in other devices, which denotes a lack of uniformity. This lack of uniformity does not seem to cause deficiencies in computing resources.

The telemetry and drone department teams are innovative and deserve special attention. There is a high degree of interest in achieving excellent quality equipment and performance. There has been a preference for the use of the windows platform and software adapted exclusively to this operating system. Apparently, there is no interest in freeware programs and operating system such as Linux, with the exception of Quantum GIS.

The Panel appreciates a high degree of efficiency in the management of resources and their optimization. The teaching and learning process involves an E-learning platform (TIES, Telecommunication Information Educational System). The TIES contains teaching/learning materials for all subjects of the program.



According to the documentation associated with the Quality Assurance Programme process covering students' academic and professional orientation (available at the quality web page of the RUDN), these services are suitable to the characteristics of the Master.

From an academic point of view, the figure of the "tutor" seems to be widely implemented for the first year students. In addition, the job portal for students and graduates is also focused on professional orientation.

At the level of the faculty, there is a general academic tutor for the master degrees. Additional academic orientation is available at the web site of the ATI, in the area devoted to the students.

The students' satisfaction with the academic and professional orientation services is very high, according to the opinion of the group participating at the meeting with the Panel.

Recommendations

RECOMMENDATION 14.- It is recommended to reinforce security measures for electrical installations, avoiding cables and multiple plugs.

RECOMMENDATION 15.- It is recommended to provide the opportunities for career and professional development of the teaching staff taking into account the employees performance results, including the colleagues and students' polling results.

RECOMMENDATION 16.-It is recommended to encourage the scientific activity, as well as innovative teaching methods and the use of advanced technologies.

Assessment: FULLY CONFORM

CRITERION 6. LEARNING OUTCOMES

Comments

The teaching guides were not accessible before the visit to RUDN, but during the interview with the Head of the Program it was possible to assess that the proposed activities, methodology, and evaluation systems were geared to the acquisition of competences of the qualification.

In addition, monitoring, revision, and adjustment of the program includes department meetings and the Academic Council of the ATI, as well as interaction with representatives of the business community. This procedure is considered to ensure the quality of the instruction for students and the attainment of the goals of the qualification.

A very high rate of the graduates (more than 90%) of the program Technologies of Geodesy and Cadastre are employed in their respective field. This is considered an evidence of the acquisition of the theoretical knowledge and practical skills that they need to achieve the competences of the Master program.

The results provided on the number of students who have completed the basic subjects since 2012 show that the learning outcomes for these courses are very satisfactory, with a success



rate of 98%, and 15% of students reaching the maximum grade. Concerning the performance in graduate qualification works, the table included in the self-assessment report refers to the last group of graduated students and all of them were successful in obtaining a satisfactory grade.

Assessment and grading systems are described in detail in the self-assessment report, both for subjects as for the Final State Examination and the presentation of Master's graduation work. The Final State Examination is oral and carried out by the State Examination Board, which must include representatives of the business community, i.e. employers. Examination papers consist of three questions that are included in the State Final Examination Programme. Questions in the programme meet employers' requirements and enable the assessment of the competences specified in the qualification.

Graduate qualification works are presented at an open meeting of the State Examination Board, which must include employer representatives. The student explains the work in 10 minutes, receives reviews from the Mentor and a Reviewer, and answers questions from members of the State Certification Board, the Reviewer and all people present at the meeting.

There are sufficient evidences that the results of the learning process in terms of competences acquired by the graduates are consistent with the graduate profile of the qualification.

Recommendations

RECOMMENDATION 17.- It is recommended the updating and revision of the information referred to academic activities and evaluation tools for all subjects of the qualification in the E-learning platform (TIES, Telecommunication Information Educational System).

RECOMMENDATION 18.- It is recommended to analyze in the self-assessment report the success rate for all subjects of the qualification.

RECOMMENDATION 19.- In the framework of the programme, it is recommended to take measures so that the students shall individually plan and make practical exercises related to solving the production-oriented tasks and shall be aware of their responsibility for accuracy of the results obtained and quality of the works performed. As a rule, the following steps are the most efficient for improvement of the educational results:

- use of individual education plans with an option of extra curricular activities;
- priority of vocation-related subjects;
- tuition fee reduction;
- material stimulation of the students (increased scholarship, bonuses for proactive attitude and research work and so on);
- update of the educational materials considering the current changes;
- improvement of students' training in languages;
- correction of grading system;
- enlarged variety of home tasks, etc.

Assessment: FULLY CONFORM



CRITERION 7. SATISFACTION AND PERFORMANCE INDICATORS

Comments

The RUDN carries out global surveys, known as satisfaction monitoring, every three years. These surveys are aimed at assessing the satisfaction of students and teaching staff with the education quality. Survey results and a comparative analysis from different years are accessible to public and can be found at the RUDN Learning Quality website. These assessments are managed by the Quality System Feedback in order to improve the process of learning and the discipline/module programmes.

Apart from global surveys, student surveys to estimate the quality of instruction in a certain subject/module can be carried out at the faculty level. The respective programs are amended as agreed during the discussion of the results of the survey.

The data presented in the self-assessment report on the results of the satisfaction monitoring correspond to a global assessment of the satisfaction with education quality of teachers of the ATI, as well as the satisfaction with the learning quality among all students of the ATI. In both cases, the results show a high degree of satisfaction from both parties, with a progressive increase during the last five years. However, there is no data on the assessment of satisfaction referred specifically to the students of the master degree in Technologies of Geodesy and Cadastre. This is also the case for the analysis of the satisfaction with teaching activities and external practice tutors. However, after the meeting with the students it is possible to state that the students are satisfied with the teaching performance of the academic staff and the external practices.

According to the statistics, the maximum level of satisfaction of students reaches over 70% in the last year, appreciating a growing trend since its inception.

The Panel did not get qualitative information about deficiencies commented in unfavourable opinions.

The effort on the part of RUDN to know and take into account the opinions of the students is very evident.

The assessment of the indicators on the rate of the employability of the 2017 graduation is quite suitable. According to the employment statistics presented in the self-assessment report, 34 of the 42 graduates are currently working, and almost all of them (32) work in their field of expertise.

According to the high expected demand for the qualification in Technologies of Geodesy and Cadastre, and the resources available at the RUDN Agricultural Technology Institute, the sustainability of the program seems to be guaranteed.

Recommendations

RECOMMENDATION 20.- It is recommended to obtain and analyze the results of the satisfaction surveys among the students of the Master in Technologies of Geodesy and



Cadastre.

RECOMMENDATION 21.- It is recommended that critical comments obtained in the satisfaction surveys be recorded and analyzed, as they can provide useful feedback and a solid image of transparency.

Assessment: FULLY CONFORM