

University Education and Training in Criminalistics and Forensic Sciences in Slovakia

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The authors in this study analyze the scope and content, including concepts of education and training in criminalistic and forensic sciences at the universities in Slovakia. After short analyses of the education system, they focus on the actual state and expected development in the near time after accreditation. They point to the need for scientific, university-based use of actual knowledge and its content as a way of classical and modern criminalistics and forensic theory and practice-oriented educational processes. The future of a much wider application in criminalistic and forensic practice and research outputs should decide on the education of criminalistics. The basis for this analysis is research and pre-research probe in Slovakia in this area. Detailed processing of knowledge was carried out within the research in the project "Methods and procedures for work at the crime scene", oriented to the main pillars for the future of university education in criminalistic and forensic sciences in Slovakia.

Keywords: Criminalistics, forensic sciences, university education, training, research, study programs

I. Base for analysis

To solve the problem, we prefer several supporting points, which we use during the analysis and which in several parts formed the framework of our view of the problem with a focus on the state and expectations of university education and training area of Criminalistic and Forensic area in the Slovak Republic. They are open formulations that are based on our professional pedagogical and Criminalistic experience and are the result of a history of development criminalistics and forensic knowledge in Slovakia.

We did not pay attention to all influences, but only those that we think were affected in our investigation.³

Our society is significantly affected by the development of new processes/technologies applicable to the education process.⁴ They most significantly influence trends and current content in educational fields and study programs. The open possibilities of self-regulation of higher education institutions have been reduced by the accreditation process since the creation of the Slovak Republic. In addition to these, of course, there are also more subjectively influenced trends, such as interest modified by the real or assumed need for practice, the

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³ Meteňko, J., Meteňková, M., 2021. Pokroky v edukácii kriminalistiky a forenzných vied na Slovensku, In.: SUJA, M., BARTA, M., CEHLÁRIK, Ľ., *POKROKY V KRIMINALISTIKE 2021*, Akadémia Policajného zboru v Bratislave, 315 s., ISBN 978-80-8054-927-5, EAN 9788080549275, ss. 222 – 241. CD - ISBN 978-80-8054-928-2 ss. 219 – 238.

⁴ Ivančík, R., Nečas, P., 2023, Security and Defence are truly a Priority for the Member States of the European Union: Fact or Hoax? In.: *ENTREPRENEURSHIP AND SUSTAINABILITY. ISSUES* ISSN 2345-0282 (online) <http://jssidoi.org/jesi/> 2023 Volume 10 Number 3 (March), [http://doi.org/10.9770/jesi.2023.10.3\(6\)](http://doi.org/10.9770/jesi.2023.10.3(6))

previous awareness of participants in the educational process, but also fashion trends presenting modernity or attractiveness in the given field of education.⁵

Our point of view is concerned with the importance of those processes, especially in the field of criminalistics and partially also forensic sciences because the scope and content of knowledge, competencies, and skills that are needed in these two sectors is indeed exceedingly broad. The development of creativity, which should be so intense precisely at the basic and intermediate level of training is irreplaceable and even unattainable in the years of education. We encounter both in Slovakia at all levels of education - from elementary school to doctoral studies at universities... This trend is visible in all types of educational institutions, from private, to public to state, especially from secondary to university.

We perceive it as a surprise that already in the 2nd year of elementary school there is a mention of - dactyloscopy, as a method - the area of examining a person from the point of view of his identification... But when we evaluate the usefulness of this knowledge for future criminalists, we find that the logic of reasoning and its practice would be a more useful tool for the student's future. Even in this case, it turns out that the breadth of knowledge presented is not the quality of creativity.

A long-term part of the regulatory processes for the preparation and implementation of educational content in Slovakia is the process of accreditation of study programs - curricula, according to which teaching and training is implemented. Accredited study programs should guarantee homogeneity of content and scope throughout the Slovak Republic, they should be a control mechanism for applying the latest scientific and professional knowledge to the educational process.

The operation of the Accreditation Commission - the previous body of the control mechanism - was more adapted to the self-regulatory mechanism that operated in Slovakia. This mechanism was based on the structure of control mechanisms formed by experts from other universities, including nominations of student and self-governing bodies. In addition to compliance with the core of the study program, which had to be observed, the control also assessed the professional and scientific competence of teachers, the spatial and technical possibilities of education, and of course the previous results and applicability of graduates. Undeniably, these criteria are probably so limiting that even new control structures will not significantly change their context. Rather, we see the path from the Accreditation Commission to the accreditation body in an effort to subordinate the entire control process to the same administrative rules and an effort to take control mechanisms more into the hands of ministerial bodies, regardless of whose positive or less positive assumption it is. The criteria are changed "on the fly" and are still in development, so the academic community of most universities is waiting for news, which often has an administrative, not developmental, character.

Since the establishment of the Slovak Republic, the trend of self-regulation of the content and forms, or scope of educational processes at colleges and universities in the Slovak Republic has prevailed. The guarantee of modernity and science was and is guaranteed by the scientific capacities at each college or faculty, which directly influence the scope, content, quality, and outputs of the educational process. The positive side of any self-regulation is relative independence from "administrative control mechanisms", which often do not adequately cover variations in cognitive processes and their qualitative changes. Administratively conditioned mechanisms react belatedly to current stimuli for the development of scientifically based knowledge. That is why it is an advantage if the presentation of the content is guaranteed and implemented by leading research capacities in the relevant field.

On the other hand, self-regulation can lead to a one-sided orientation, but if the quality of the transfer of the latest scientific knowledge is neglected by the guarantor of the subject or study

⁵ Chovanec, M. 2021: *Ontogenetické teórie vo forennej psychológii*, Centrum polygrafických služieb, APZ, Bratislava, s. 112, 2021.

program, it can also lead to a significant decrease in the quality of education. This is also the reason for the long-term operation of the control mechanisms that we are investigating in the field of accreditation in Slovakia.

Powers on the accreditation of higher education institutions are currently delegated by the government to the Accreditation Body at the Ministry of Education. ⁶

Estimated trend:

1. The most prominent symptom of the trend is the reduction in the volume and thus the content of Criminalistic teaching at all systemically important educational institutions in Slovakia.
2. The trend mainly concerns the law and security faculties of public and private universities, secondary security schools, and partially also the Police Academy.
3. The process of reduction is most visible when comparing the phases of accreditation, which takes place approximately every 5 years.
4. The trend is currently visible at all universities.
5. Overall, it can be stated that the scope and content of the teaching of Criminalistic is reduced, and the relative increase in the scope of the teaching of Forensic Sciences is recognized in the biggest universities as important educational institutions.

II. Presentation of analyses

A *Criminalistics as a profiling subject*

(i) *Law faculties*

The process of the increase of university-educated lawyers is visible in all universities. In the long term, there is an observable reduction in content and scope, and at the same time, apparently, interest in education in the field of Criminalistic and forensic knowledge. In the past, well-known and preferred Criminalistic departments, institutes, and other forms of organization of scientific university Criminalistic teaching are long gone, historically the preference for the development of Criminalistic theory by criminalists with a legal orientation is probably also here. A comparison of the stages of accreditation, which takes place approximately every 5 years, shows a decline not only in the above-commented facts but also a reduction in the volume and content of Criminalistic at all law faculties in the Slovak Republic.

However, the same trend is currently visible in practically all universities where Criminalistic is taught. From full-time students in subjects usually in the past for 2 times 48 hours in 2 semesters to compulsory elective subjects, in only 36 hours in 1 semester, where all law faculties are heading in the current accreditation – with the 3 credits (ECTS).

Let's add to this that it is the full content of all Criminalistic, so if it is primarily perceived logically at law faculties - in the spirit of Gross broad concept ⁷, including investigation methodology and with a focus on Criminalistic-methodical teaching effects. The reduction is commented on by teachers and managers of law faculties, in the sense that students are not interested in learning Criminalistics.

After the accreditation, which is currently underway, all law faculties in Slovakia will only have compulsory elective courses in Criminalistic in the range of 36 hours of lectures, most often in

⁶ Meteňko, J., Meteňková, M., 2021. Pokroky v edukácii kriminalistiky a forenzných vied na Slovensku, In.: SUJA, M., BARTA, M., CEHLÁRIK, Ľ., *POKROKY V KRIMINALISTIKE 2021*, Akadémia Policajného zboru v Bratislave, 315 s., ISBN 978-80-8054-927-5, EAN 9788080549275, ss. 222 – 241. CD - ISBN 978-80-8054-928-2 ss. 219 – 238.

⁷ Gross, H., 1914 *Handbuch für Untersuchungsrichter als System der Kriminalistik*. II. Teil [Príručka pre vyšetrovujúcich sudcov ako systém kriminalistiky. II. časť]. - 6. umgearb. Auf. - München: J Schweitzer Verlag, 1914. - 1214 s.

the 2nd or 3rd semester of the master's degree. At one law faculty, 2 exercises with an experienced investigator - a former investigator are also proposed in the subject.

The content is the "whole" of Criminalistic, no forensic science, including theory, technique, tactics (especially methodology), and "methodic". This is practically impossible to implement in its entirety, and therefore only some selected topics are taught, usually the most popular ones. The number of students involved in one year of study is a maximum of 20% of the students involved per year from the entire year. The teaching of forensic medicine and psychology for lawyers is cumulated in one subject - as an optional subject. The participation is about 10 students from the year. Thus, even the representation of Forensic Sciences, whose current frequent "applications" from films and series attract viewers, is not a significant motivational element for students of law faculties to show interest in the field we are researching.

Graduates of law faculties themselves express their lack of interest, for example, that while the law - Criminal Procedural Law imposes duties and prohibitions on the investigation controlled by the prosecutor, an incorrect substantive procedure or an inaccurate result, guaranteed by Criminalistic, is not checked and corrected in practice - by anyone. It is enough to fulfill the formal and legal conditions of the law, on the other hand, the recommendations of the Criminalistic and Forensic science for the correct procedure and its result are not a criterion for the evaluation of the investigator.

(ii) *Security faculties*

The process of reducing the number of university-educated security officers or engineers in Criminalistic is also visible at other universities and colleges. Again, we can compare the stages of accreditation, which take place approximately every 5 years.

The reduction is not so fast as in the law faculties, but the teachers and managers at security faculties point to the information that they are not interested in teaching criminalistics knowledge due to the "requirements of security practice". The interest of students in these faculties is considerable. But reducing the content and range of lessons is also important here. The requirements for the addition of new subjects, especially of the humanitarian type - "international cooperation", "EU organization", "security management" or other similar ones, create pressure to reduce the number of hours of Criminalistics.⁸ The scope of teaching at the two-semester level implemented so far, with the possible addition of theoretical knowledge in the next semester, will probably not be sustainable here either. The prerequisite in this case is a maximum of 2 semesters, content focused on practical knowledge and partly training in some topics. In complex of 4 + 4 + 5 credits (ECTS).

After the accreditation, which is currently underway, all private and public except state faculties of higher education institutions in Slovakia, where criminalistics knowledge is taught, and at all law faculties in Slovakia, only compulsory electives will probably remain, most often in the 2nd or 3rd semester of study, usually in the years of master's studies. At one law faculty, 2 exercises with an experienced solver are also proposed in the subject.

(iii) *Academy of the Police Force in Bratislava*

After the accreditation, which is currently also taking place at the Academy of the Police Force in Bratislava - in another APZ, there should not be any significant changes in the scope or content of Criminalistics and Forensic Sciences education, as we analyzed them from the findings at other Slovak universities. At the only state college of security sciences (APZ), teaching of complete Criminalistics according to innovative concepts of Criminalistics theory without investigation methodic. The content of selected problems of the theory connected with criminalistic technique and the content of tactics is taught in the form of lectures and seminars, for both systemic parts of the content of Criminalistics in the scope of 48 hours per semester.

⁸ Ivančík, R. 2022. *Bezpečnosť. Teoreticko-metodologické východiská*. Plzeň: Vydavatelství a nakladatelství Aleš Čeněk, 2022. 240 s. ISBN 978-80-7380-873-0

Currently, both subjects are taught in the bachelor's degree in the sequence of the 2nd and 3rd years 4+4 credits (ECTS).. They are followed by the education of mandatory optional subjects in the scope of 36 hours of training and practice in both contents, i.e. Criminalistics technique and tactics – 3+3 credits (ECTS)..

Variant - depending on the need and occupancy of the hourly subsidy, there is a varied mandatory/mandatory optional representation of both practical subjects from technique and tactics. According to the proposed assumptions, the study program Security-legal protection of persons and property - which is currently also taught at APZ and is relatively uniformly set up for security studies in Slovakia - will remain in the content concept of Criminalistics at APZ, taught in the 2nd and 3rd year of the bachelor's study with 4 credits (ECTS) of this security study program intended primarily for future or active police and, or security officers.

In addition to the mentioned basic contents for Criminalistics education at APZ, there is a prepared, but unfortunately understaffed, subject Theory of criminalistics for students in the master's study of this study program 3 credits (ECTS). Its content is focused on the theoretical foundations of criminalistics - which are presented only in a very abbreviated form due to the lack of an hour subsidy at the beginning of the study, and at the same time, specific topics focused on the latest knowledge and applications in criminalistic are presented - primarily from technology. The reason for the very low participation of students it is primarily the fact that they have already mastered the practical applications of most of the topics and the credit subsidy does not motivate them to enroll in this subject at the end of their studies. Its contents include the theoretical foundations of Criminalistics: Development of criminalistics and criminalistics methods. Criminalistics systems, subject, object, methodology, and processes. Theoretical foundations of criminalistics research and investigation. Scientific foundations of criminalistics investigation and research. Processes in Criminalistics. Theory of criminalistics traces and trace carriers. Substance traces. Memory traces. Traces of fields. Signs of criminal traces and their investigation. Criminalistic examination methods and investigation procedures. Applications of forensic knowledge in police sciences.

Part of the enrichment of the content of the teaching of Criminalistics at APZ in this study program (Security-legal protection of persons and property), are optional subjects according to the interest and expected specialization of the student, where the following subjects are presented: Criminalistics examination and expertise – 3 credits (ECTS), 2 subjects devoted to theoretical and application questions of Interrogation and Reconnaissance with an hourly subsidy in the range of 24 hours 3+3 credits (ECTS).

In Forensic Sciences, we currently include Forensic Psychology in the scope of 36 hours 4 credits (ECTS), [4] as a compulsory subject, and similarly the combination of "Forensic Medicine and Forensic Psychiatry" in the scope of 48 hours – 4 credits (ECTS) - both as a compulsory subjects in the master's study. Currently, Forensic propedeutics is not being filled, and according to some proposals, a reduction of optional subjects is also expected.⁹

For the 3rd level of education – PhD study in the 2nd semester of study, we have available 48 hours of study of the subject "Methodology of criminalistic research" – 6 credits (ECTS), as a compulsory elective, but usually very decently filled, with topics:

Historical context of the development of criminalistic methods, subject, and system of criminalistic methods in the protection of persons and property¹⁰. Criminalistic identification and criminalistic investigation Criminalistics trace theory, digital traces¹¹ Criminalistics

⁹ Chovanec, M. 2021: *Ontogenetické teórie vo forenznej psychológii*, Centrum polygrafických služieb, APZ, Bratislava, s. 112, 2021.

¹⁰ Tremmel F., Fenyvesi Cs., Herke Cs., 2005 *Kriminalisztika. Tankönyv és Atlasz*. Dialóg-Campus Kiadó, Budapest-Pécs, 2005.

¹¹ Meteňko, J., a kol. 2004. *Kriminalistické metódy a možnosti kontroly sofistikovanej kriminality*. Bratislava 2004. Akadémia PZ SR v Bratislave. ISBN 80-8054-336-4, EAN 9788080543365. 356 s., ss. 26 – 120.

methods of examining a person's external signs - scientific foundations Criminalistic methods of examining the external signs of a person - peculiarities Criminalistic methods of examining external signs of objects - scientific foundations Criminalistic methods of investigating external signs of objects - peculiarities Criminalistic methods of investigating functional and dynamic properties - scientific foundations Criminalistic methods of investigating functional and dynamic properties – peculiarities Criminalistic methods of investigating the composition and structure of substances and objects - scientific foundations Criminalistic methods of investigating the composition and structure of substances and objects - peculiarities Investigating criminal traces by activation of consciousness - scientific basis Investigation of criminal traces by activation of consciousness - peculiarity Searching, securing and supplementing criminal traces - scientific basis Searching, securing and supplementing criminal traces - peculiarities Investigation of criminal traces by activation of consciousness by association - scientific basis Investigating criminal traces by activating consciousness by association - peculiarities Investigation of crime traces by experiment - scientific basis Investigating criminal traces by experiment - peculiarities Criminalistic versions - scientific foundations Criminalistic versions - peculiarities Criminalistic documentation - scientific foundations Criminalistic documentation – peculiarities.¹²

Education for "methodic" in the sense of the classical theory of criminalistic according to Gross¹³ is similar. Due to the above-mentioned conceptual changes in the scope and content of Criminalistic and Police Sciences, presented as Theory of Investigation and Theory of Evidence - in the scope of 48 hours – 4 credits (ECTS), per semester and the education of compulsory elective subjects in the scope of 36 hours of training and practical teaching – 3 credits (ECTS). It is assumed that it will always remain in the study program separately for bachelor's and master's studies. Education, however, in the spirit of innovation of the Criminalistics system with the inclusion of Criminal Investigation Methodology in the concept of Police Sciences, is conducted by a separate Department of Investigation.

In this study program, we see better education in basic theory as a problem, and we are preparing accreditation for the 3rd semester of the bachelor's study subject "Theory of Criminalistics" as an "introduction to Criminalistic".

Therefore, we are preparing changes for the new accreditation, which we will comment on below. In this study program, we are preparing the current accreditation for the 1st semester of the master's study of the subject "Forensic Sciences" - for better education in the basic aspects of all other forensic knowledge from the field of theoretical and practical forensic concepts that have not yet been interpreted in the scope of teaching at APZ - forensic engineering, accounting, State exam in Criminalistic on the end of bachelors study is honored by 5 credits (ECTS).

A peculiarity, and not only for the case analyzed below in the study at APZ, is the use of criminalistics knowledge also for the needs of another study program - Security and legal services in public administration. Conditionality and interrelationships of the activities of specialists, for which the above field of study prepares experts, require knowledge of cooperative and related activities that are used for their work activities. This is the main reason that the students of this study program in the second year of their bachelor's studies also encounter criminalistic content. For the sake of simplicity, we state that a similar scope and a more practical focus in supporting optional subjects can be expected even after accreditation. In the 38-hour Introduction to Criminalistics subject 4 credits (ECTS), which ends with an

¹² Similar as presented in: Žarković, M., Ivanović, Z., 2014 *Kriminalistička taktika*. 1. Ed., Beograd: Kriminalističko – policijska akademija, 2014. Beograd – Službeni glasnik, 366 str. ISBN 9788670202641., and Hejda, J. a kol. 2003 *Základy kriminalistiky a trestního práva*, VŠE v Praze, 2003, 1.

¹³ Gross, H., 1914 *Handbuch für Untersuchungsrichter als System der Kriminalistik*. II. Teil [Průručka pro vyšetřujících sudcov ako systém kriminalistiky. II. část]. - 6. umgearb. Auf. - München: J Schweitzer Verlag, 1914. - 1214 s.

exam, colleagues have a summarized overview of some - for them - essential topics: Introduction to Criminalistics. Criminalistics system. Methods of criminalistic. Criminalistic and Forensic trace. Theory of reflection. Digital traces. Criminalistic dactyloscopy. Criminalistic examination of a person's portrait. Criminalistic photography. Criminalistic examination of handwriting. Criminalistic investigation of language. Criminalistic examination of documents and papers. Criminalistic examination of typescript. Falsification and alteration of documents and deeds Expert and professional activity. Criminalistic chemistry. Criminal documentation. Inspection. Interrogation. Confrontation. Criminal version. Verification of termination on the spot. A criminalistic experiment. Reconnaissance. Criminal inspection. Reconstruction. Criminal records and collections. We assume that even in this case, the content will be preserved even after accreditation, and there is a potential extension for some practical applications.

B Forensic sciences as a profiling field ¹⁴

However, in a detailed analysis, this range and any changes caused by it do not cover the needs of security practice. When the volume of teaching in Forensic Sciences grows relatively, it is a relative state, because it often includes other specific educational processes (for example, in chemistry, biology, etc.), so-called mother sciences, and disciplines. As an example, we will use the study program Forensic and criminalistic chemistry, in the field of study 1420 Chemistry, prepared and implemented at Matej Bel University in Banská Bystrica. List of compulsory subjects by semester:

General chemistry 1/Z Chemical calculations 1 1/Z Mathematics 1 1/Z Human anatomy 1/Z Basics of forensic sciences 1/Z Inorganic chemistry 1 1/L Organic chemistry 1 1/L Fundamentals of physics 1/L Chemical calculations 2 1/L Basics of criminalistics 1/L Inorganic chemistry 2 2/Z Organic chemistry 2 2/Z Physical chemistry 1 2/Z Molecular biology and genetics 2/Z Physical chemistry 2 2/L Analytical chemistry 1 2/L Toxicology 2/L Chemistry of toxic substances 2/L Nuclear chemistry 3/Z Analytical chemistry 2 3/Z Theory of chemical bond 3/Z Biochemistry 1 3/Z Theoretical foundations of the analysis of toxic substances 3/Z Biochemistry 2 3/L Chemical structure 3/L Criminalistic methods 3/L, supplemented by 19 compulsory optional subjects, with content that really supports the content of the study program, showing the basic orientation of the content towards the "mother discipline" - chemistry.

It is logical in such cases since the saturation of teaching and training must have principled support in staffing by educators. A guarantee of high-quality content cannot be provided "to order" and the availability of guaranteeing educators is not feasible without a long-term orientation to those interested in the area of the relevant science. In Slovakia, scientific and research activity in Forensic Sciences is relatively poor, so concepts with a predominance of mother sciences, in this case chemistry, are logically introduced.

Despite the current development - probably the impossibility of continuing with the second stage of the program, this feat is unique in Slovakia at this stage of implementation. We noted a similar attempt in the past in Trnava, but it only reached the stage of preparing the content of the study program. An indisputably positive achievement in the history of Slovak Forensic Sciences, which will help saturate the lack of qualified experts, at least in the area of Forensic and Forensic Chemistry. From the point of view of the content of forensic and criminalistics practice, a less general focus on chemistry and supporting sciences and a more intensive supply of information on the content of criminalistics, or in the practical examination of related

¹⁴ In prepared study with abstract: METEŇKO, J., METEŇKOVÁ, M., (2023), Critical Analysis Criminalistics and Forensic Science Education - at Universities in Slovakia. *BOOK OF ABSTRACTS, Education, Research & Development, 14th International Conference, 23-26 August 2023*, Burgas, Bulgaria, www.sciencebg.net, <https://www.sciencebg.net/collection/download/ab-education2023.pdf>, p. 39

forensic disciplines, would be required already in this degree. Our previous thesis about the "relative increase" in the volume of the teaching of forensic disciplines conditioned by the substitution of knowledge from the parent discipline - in this case, chemistry, at the expense of criminalistics knowledge, was confirmed and, given the established lack of qualified educators for many forensic branches, will continue to apply.

III. Results and discussion – as a perspective

A Trends in Accreditation Process and Other Limitations

Since we have briefly covered the trend estimation for study programs focused on law, as well as for security-focused programs at other types of universities, in the relevant parts of the work, which we focused on the researched concepts of criminalistic and forensic science education, we can state that the hypotheses in all items 1-5 are confirmed. The break in scope and content is also connected with the accreditation process and its development, as the staffing of quality guaranteeing personalities of professors and docents is very narrow and the previously accepted coverage through related departments will be a problem. Of course, the estimate will only be able to be confirmed after the finalization of the current accreditation processes and the comparison of their consequences in the individual groups of universities and colleges involved. From the perspective of the development of Criminalistic and Forensic Sciences in Slovakia, we see a problem in a sufficiently wide and high-quality scope of education for specialists who work primarily in the field of Criminalistics, including investigation, we tend to call this group of expert criminalists. For the needs of such education, we have been accredited for more than 10 years with a special study program "Criminalistic and Criminology in Security Activities" for all 3 levels of higher education. But from our point of view, formal problems prevent opening the subject to the needs of criminalists. Due to the fact that we were principally involved in the creation of this field of study and the corresponding study program, we would like to briefly describe its content and concept if possible. Criminalistic and Criminology is a field of study (hereinafter only ŠO as field of study) from the system of study fields, administered by the Ministry of Education of the Slovak Republic, as a field of knowledge (§ 50 paragraph 1, Act No. 131/2002, on universities and on the amendment and supplementation of certain laws as amended by later regulations, in which the graduate of the study program acquires the professional ability and competence to perform his or her original profession or prepares to continue further university studies.

B Academy of the Police Force in Bratislava – long term expected future: Study field of Criminalistics and Criminology / 8. 3. 4 (Criminalistic and Criminology).¹⁵

Degrees of higher education in which the major is studied and the standard length of study programs for these degrees of higher education: The field of study Criminalistic and Criminology can be studied in: - the first degree of university studies (B.C.) with a standard length of 3 years in the internal form of study and 4 years in the external form of study, - the second degree of university studies (Mgr.) with a standard length of 2 years in the internal form of study and 3 years in the external form of study, - the third degree of university studies (PhD.) with a standard length of study of 3 years in the internal form or 4 years in the external form of study.

¹⁵ Meteňko, J., Meteňková, M., 2021. Pokroky v edukácii kriminalistiky a forenzných vied na Slovensku, In.: SUJA, M., BARTA, M., CEHLÁRIK, E., *POKROKY V KRIMINALISTIKE 2021*, Akadémia Policajného zboru v Bratislave, 315 s., ISBN 978-80-8054-927-5, EAN 9788080549275, ss. 222 – 241. CD - ISBN 978-80-8054-928-2 ss. 219 – 238.

The reasoning for the need: Ensuring the education of security service workers in the field of Criminalistic and Criminology is necessary for the protection of society from negative anti-social phenomena, from various types of criminal activity, especially from organized crime as well as from terrorism. The most important parts of the security structure can no longer be secured by substitutes in the level and content of knowledge. The long-term security situation in the Slovak Republic, Europe, and the world requires university-educated professionals who will be ready and able to effectively manage increasingly complex and detailed criminalistic and preventive systems in the fight against criminals in the control of the most serious types of crime, organized crime or terrorism. The need is expressed by a social order for the qualification of experts and managers in security services. Criminalistics and criminological knowledge is used by state and public law institutions and organizations, which today represent a separate field, characterized as security services for the population. The management of these institutions and organizations requires the training of qualified specialists and managers who have mastered not only the principles and methods of security management but especially the specific application of their Criminalistic and criminological needs. The need for correction of these procedures and methods, and implications of the latest knowledge, which cannot be realized only by taking knowledge from proven sources as it was until now, is shown.

Similar fields of study abroad: ¹⁶

- Police Academy of the Czech Republic, Prague – Police Management and Criminalistics,
- Tomas Bata University, Zlín – Security technologies, systems and management,
- Ludovika University of Public Service in Budapest, Hungary – Faculty of Law Enforcement,
- Technical University of Ostrava, Faculty of Safety Engineering – Fire Protection and Industrial Safety,
- Academia, Universita Beograd, Serbia – Criminalistic, criminology, investigation,
- Volgograd Academy – Criminalistic and forensic expertise,
- Mikolas Romarius University, Vilnius Republic of Lithuania,
- University Southampton Great Britain – Criminology
- Krakowska szkola wyzsza, Krakow – Zarzadzanie bezpieczenstwem,
- Akademia wychowania Fizycznego w Katowice – edukacja obrona,
- Université de Lausanne / EPFL - Lausanne Polytechnic – Forensic Sciences, Identification, Traceology and Criminal Analysis, Criminal Sciences and Law.

Definition of related fields of study and differences between them:

- Protection of people and property
- Security public-administrative services
- Rescue services
- Civil security.

Graduates of the study field of Criminalistic and Criminology are eligible to perform the following professions according to the level of study achieved:

1st degree (B.Sc.) - security worker-specialist for work at the scene of the crime, investigation and preliminary criminal investigation, or simple criminological analyses and the use of their results in an organization that provides services mainly in the protection of persons and property, - manager and specialist at the basic level of management in the system of criminalistic or criminological activities of the police and security services. A graduate of the first degree of study masters the issue of managing basic institutional security structures and the security systems used in them for the use of criminalistic and criminological knowledge,

¹⁶ Item.

has basic knowledge in the field of criminalistic, forensic, and criminological activities, technical means, preventive methods, search and seizure procedures and detailed legislation, which security organizations can apply in practice.

2nd degree (Mgr.) - a manager at middle and higher level of management in the state administration, in the system of the police and security organizations providing services in the field of criminalistic, forensic sciences or criminology, - independent worker, specialist - expert of state and non-state organizations providing professional, expert and expert activity in the fields of criminalistic, forensic sciences or criminology for the comprehensive assessment of violations and threats to systems in the protection of the safety of persons and property, their causes and remedial options. A graduate of the second degree will acquire the necessary knowledge in the field of legal regulation, system analysis of pre-defined and undefined criminalistic objects or criminological systems, and their design and management. He masters most of the analytical methods of assessment and examination of selected criminalistic and forensic objects, methods of projecting criminalistic or criminological activities of security systems, knows how to manage specialized work teams and coordinate their activities, and ensures control within security systems. He has the skills and abilities to creatively analyze criminalistic situations or criminological situations and project appropriate solutions for their recognition and regulation. He can qualitatively assess and evaluate solutions from the point of view of quality guarantee and support of legal, technical, and economic security of criminalistic or criminological activities. A graduate of the second degree has the ability to prepare and manage the activities of security investigation, search, and monitoring teams even in emergency situations, applying the principles of the theory of criminalistics or criminology, in the role of the leader of the implementation team. Based on a creative approach, he can analyze criminalistic and criminological factors of the security situation in the area of conception, analytical activity, organization, control, and securing of these activities and propose optimal solutions aimed at ensuring the effective protection of persons and property.

3rd degree (PhD.) - management and analytical worker at the top level of security management in the Police Force and in organizations providing security services in public administration, with a focus on criminalistics or criminology - research and scientific worker or university teacher in the field of criminalistics, forensic sciences or criminology. A graduate of the third level of study masters scientific methods and procedures in the field of Criminalistic and criminology, in particular, the investigation and evaluation of various specific and non-specific influences on the overall level of application of knowledge of criminalistic or criminology, scientific research and brings new knowledge and approaches to securing, searching and investigating criminalistics objects, or criminological situations, etc. On the basis of scientific methods of knowledge and research, it proposes conceptual and systemic solutions for the application of the knowledge of criminalistic or criminology. It applies a systemic approach in solving the tasks of the security of the state, society, persons, and property.

(i) *Content of the study field Criminalistic and Criminology:*¹⁷

A graduate of the first degree can analyze problems and situations that arise in various areas of application of Criminalistic and criminology knowledge, design parts of systems, ways of solving their crisis situations, as well as entire systems so that they meet the requirements of systematicity and is capable of applying them in an organizational structure dealing with the mentioned areas. A graduate of the first degree of higher education in the field of Criminalistic and criminology will acquire the theoretical knowledge and practical skills necessary to master

¹⁷ Content concentrate in: Tremmel F., Fenyvesi Cs., Herke Cs., 2005 *Kriminalisztika. Tankönyv és Atlasz*. Dialóg-Campus Kiadó, Budapest-Pécs, 2005., and Krajník, V, a kol. 2002 *Kriminalistika*. 1.vyd. APZ v Bratislave. Bratislava 2002. ISBN 80-8054-254-6, including: Šimovček, I., 2000 *Teória kriminalistiky*. - Bratislava: IURA EDITION, 2000. - 157 s.

a profession in the field of security services. He is able to independently perform managerial functions at lower levels of management and specialist functions at middle levels of management. He meets the requirements for professional competence according to the legislation of the Slovak Republic and according to the European Vocational Qualifications for Basic Guarding. Graduates are employed in state administration and the public sector. Can implement knowledge of criminalistics or criminology in the system of individual organizations, even in extraordinary situations; has the necessary knowledge of the theory of criminalistics, forensic sciences, and criminology, the basics of the law, the interpretation, and application of this knowledge in the activities of individual security services in the detection and clarification of criminal activity. The graduate will acquire theoretical knowledge and knowledge to continue in second-level university studies. Theoretical knowledge of the first degree of the study field of Criminalistic and Criminology: - acquires and understands in detail essential information, terms, principles, legal, natural science, social, humanitarian, and technical theories related to the performance of criminalistic or criminological activities in the security services - acquires the knowledge necessary to understand the structure and functional links of systems of criminalistic or criminological activities in security services - acquires the theoretical knowledge necessary for the performance of basic managerial functions in the management of forensic teams or the implementation of preventive criminological activities - knows how to choose appropriate criminalistic or criminological procedures, methods and the method of their application in the activity of security services, using theoretical and practical experience for their application. Practical abilities and skills required for the 1st degree - specify, propose and implement individual ways of applying the methods of criminalistic or criminology to ensure the safety of persons and their property, including all their legitimate rights and interests - specify, propose and apply the procedures of criminalistic or criminology methods, especially in the search, preliminary investigation, securing and protection of criminalistic or criminologically significant objects of interest - evaluate the available systems of criminalistic or criminology procedures based on standard and non-standard requirements for the application of said systems - assess the basic economic aspects of the methods of criminalistic or criminology, use their analyzes especially for the needs of their procurement and the procurement of technical means - apply requirements and offers to the legal system when creating a system to ensure the safety of people and their property - effectively manage the system of execution of procedures at the scene of the crime, related to ensuring the safety of persons and their property carried out by security organizations and institutions - carry out an inspection of the system of application of criminalistic or criminology methods, eliminate its shortcomings and change the system as necessary - effectively manage work teams and organize cooperation with entities participating in ensuring the safety of persons and their property, especially during investigations and criminalistic or criminological investigations, - acquires the necessary practical skills for obtaining the professional competence to perform the profession of searching for and securing individual types of traces in criminalistic technical activities of all security services according to the legislation of the Slovak Republic and EU requirements. Additional knowledge, abilities and skills (1st degree) A graduate of the field study of Criminalistic and Criminology in the first degree can: - type, search, assess, secure all types of criminalistic and forensic traces and criminalistic significant objects, - to present to individual categories of persons evidentiary, technical and organizational problems of searching, securing and preliminary investigation of all significant objects of criminalistic or criminology, - clearly and succinctly express qualitative and quantitative problems of search, preliminary investigation, securing and distribution of criminalistic traces and their carriers, or criminalistic objects of investigation, - effectively expand and deepen your knowledge of the field and continue your professional special development, - manage the activities of a small work team at the scene of the crime and in the area of performance of criminalistic or

criminological methods, - organize and manage professional training activities in the specified area, - obtain, process, and use information necessary for the performance of the profession. Main topics of the knowledge core of the study field (1st degree): - knowledge of Criminalistic and criminology for the legal basis of the security of persons and property in the Slovak Republic and in EU countries, - methods and procedures for searching, preliminary investigation, securing, transporting and archiving criminalistic and forensic traces and other significant objects - natural science, technical, social and humanitarian nature and technical aspects of the application of criminalistic or criminological systems, - application of criminalistic or criminological systems to ensure the safety of persons and property, - basics of managing criminalistic or criminological teams, - documentation activities and information logistics for the specific needs of security services, - technical support of security services, - professional ethics, psychology and sociology, penology, - final thesis - state exam (Bc).

(ii) Content for the second-grade

A graduate of the second degree of university studies in the field of Criminalistics and Criminology will acquire detailed theoretical knowledge and practical skills necessary to develop the abilities of their creative application in the performance of a profession in the sphere of security services. The graduate can analyze criminalistic objects and criminological states and situations in the field of security and its violations. He can independently process conceptual proposals for solving malfunctions in the entire system of criminalistic or criminological situations and its individual elements. He can independently process expert opinions and expert statements in defined sectors. The graduate acquires theoretical knowledge in the field of application of knowledge of Criminalistic and criminology to support the safety, and protection of persons and property, especially follow-up and preventive measures. He will develop intellectual abilities, practical skills, and personal qualities that will enable him to independently prepare and implement professional and expert, and specialized criminalistic or criminological investigations, as well as projects and take responsibility for their complex solution also at the national and international level. The graduate is able to obtain and analyze criminalistic or criminological information from the security environment, perform risk and relational analyzes and design corresponding parts of security systems, and propose and adopt appropriate solutions to ensure the protection of persons and property even in emergency situations. He is able to lead and manage analytical and executive teams even in the most complex cases of crime scene work and other criminalistic or complex criminological tasks. He can adopt complex solutions to ensure security from the point of view of criminalistic or criminology. The graduate will acquire knowledge in the field of theory and practice of criminalistic or criminology, enabling him to manage teams of workers in this field, independently lead specific security actions, and take responsibility for the correctness of their solution. A graduate of the department can effectively manage the activities of organizations and professional work teams at the middle and highest level of management of criminalistic or criminological activities, organize cooperation and coordinate activities with all cooperating entities. A graduate of the field of study of Criminalistics and Criminology has the necessary range of knowledge from the theory and application of natural, technical, social, and humanitarian sciences, including law and security, for the successful performance of tasks in security systems, especially in the area of protecting the rights of persons and their property. A graduate of the level masters the system and methodology of creating intentions and concepts of criminalistic and criminological activities, especially for the needs of security services, and has the necessary knowledge about the creation of their organizational structures, methods, and forms of their work in accordance with forecasts of the development of the security situation. Can apply acquired knowledge in the implementation of international cooperation and fulfillment of tasks in accordance with the requirements of supranational and international bodies and organizations. The core of his knowledge includes: - the theory of criminalistic

traces and criminalistic investigation and methods of criminological investigation, - the theory of Criminalistic and criminological expert activities and the ability to apply the system of criminalistic knowledge in the process of clarifying and documenting criminal activity, - knowledge of criminology with the ability to create conceptual plans for crime control, implementation of systems of preventive measures, especially in the field of organized crime, - criminalistic and criminological systems, institutional and organizational structures, used technical systems and work organization in the Slovak Republic and the EU, functions and mutual relations in ensuring criminalistic and criminological activities, - legal knowledge directed at the graduate's ability to use criminalistic and criminological knowledge, - management of criminalistic and criminological systems (managerial functions, decision-making processes, personnel management, value management, management information systems), - knowledge of the management of criminalistic and criminological activities, their identification, analysis of variant solutions with consideration of the priority of risks, their evaluation, - theory and practice of police and security services, theory of detection, investigation and proof of criminal activity, - methods and means of implementing conceptual intentions and measures in the activities of a manager and specialist. - technical systems and means of criminalistic and criminological activities and the ability to use them in fulfilling the tasks of the security services and propose measures for their modernization, - Diploma thesis - a specific solution to a problem in the field of criminalistic or criminology resulting in conceptual measures of the solved problem.

(iii) Content for third-grade

A graduate of the study field "Criminalistic and Criminology" of the third degree of higher education has a comprehensive knowledge of crime as a collective socio-legal phenomenon, the possibilities of its control, and its prevention. It controls the methods of obtaining, securing, evaluating and using criminalistic traces and criminalistic identification. He also has knowledge of natural, technical, humanitarian, and social study fields, obtained by combining the knowledge of study fields. The graduate masters scientific research methods and is able to formulate a scientific problem, process a project, conduct scientific research, and present research results. The graduate controls and competently uses extensive knowledge from criminalistic, criminological, expert, and expert activities. He is able to apply a systemic approach with an emphasis on theoretical and empirical research methods and techniques, to optimally transform scientific knowledge of police and security theory, criminalistic, forensic sciences, and criminology into police and security practice. It will be applied not only in the field of expert, criminalistic and expert activities, criminalistic and preventive activities, in the drafting of criminal law and related standards, but also for activities in the sphere of education, science, and research. The scientific part of the study field "Criminalistic Studies and Criminology" consists of the student's individual scientific work or his active participation in scientific teams. He independently develops a project a research task, which forms the basis of his final (dissertation) work. It uses empirical and theoretical methods to obtain, systematize and interpret original knowledge about crime, its prevention and the securing and identification of criminalistic traces, methods of their investigation, and its interpretation. The results of scientific activities are presented at domestic and international scientific-theoretical events and in the form of scientific publication works. Doctoral students in both full-time and part-time study demonstrate appropriate activities in direct pedagogical activity in the teaching process as well as in supervising the final theses of bachelor's students. A graduate of the third degree of higher education prepares a dissertation in which he demonstrates the ability to independently acquire theoretical and practical knowledge based on the current state of scientific knowledge and, in particular, demonstrates his own contribution, which is the result of his scientific research and independent creative activity. During the defense of the

dissertation, he presents the results of his own research work and demonstrates the ability of independent scientific work in the field of study.

IV. Conclusion

Concerning the ongoing accreditation as unknown variations of the influence on the education process, which we outlined in the introductory parts, it is very difficult to estimate the state that will be here in the next 5-6 years. It depends a lot on the personnel substrate that criminalistic currently has and will have in the near future in the practical and theoretical personal substrate of its enforcement.

In our opinion, the limiting factor is and will be new technologies and, on a theoretical level, with the theory of criminalistic traces, theory of identification, and theory of criminalistics examination as a homogeneous theory, including the theory of memory traces, and especially digital traces. For the current and certainly, for the future of Criminalistic, the limiting factor will definitely be the handling of the problem of new technologies and their related application variations, which are not directly perceived as a criminal offense, but without their application, such an illegal situation would not even arise. Misunderstanding of this situation currently leads to Criminalistics lagging behind Forensic Sciences in some areas, and even to the abdication of the position that Criminalistics had in the past.

On the other hand, it is precisely new and unused or unknown technologies as a means or goal of an activity that often raise doubts as to whether the action of a criminal is.

The absence of corresponding provisions in criminal law raises and may raise doubts about the criminality of such a procedure, or about the need and possibility of otherwise sanctioning such activity. Knowledge of socially unacceptable processes related to the misuse of communication and information technologies has been a subject of criminalistic for a long time.¹⁸ In many countries, often under the strong influence of English-speaking IT experts, it is combined with a forensic approach, since, according to several of our criminalists, "criminalistic does not have its own methods of investigating traces related to technologies" KaI. Unfortunately, even some Slovak sources come close to such an assumption.¹⁹ In our opinion, this "non-existence of own criminalistics methods" was primarily related to a theoretical and practical deficiency - failure to process knowledge about the existence of a digital trace.

The development of modern human society is currently based on the use of knowledge and new technologies. Although it presupposes automatic, but a professionally and scientifically based processing of data and information that penetrates everywhere. Currently, there is practically no branch of human activity where we would not encounter new knowledge and its applications. The near future will be characterized by greater and deeper integration of technologies with other professional activities.²⁰ Mastering these processes without the ability to apply new knowledge at a scientific level is not and will not be possible even in criminalistic, as well as in other areas and branches of human knowledge.²¹ Trying to manage the increase in volume, variability, and quality of knowledge development without the necessary level of university education is neither possible nor conceivable. The scientific knowledge of criminalistics,

¹⁸ Meteňko, J., a kol. 2004. *Kriminalistické metódy a možnosti kontroly sofistikovanej kriminality*. Bratislava 2004. Akadémia PZ SR v Bratislave. ISBN 80-8054-336-4, EAN 9788080543365. 356 s., ss. 26 – 120.

¹⁹ Krajník, V, a kol. 2002 *Kriminalistika*. 1.vyd. APZ v Bratislave. Bratislava 2002. ISBN 80-8054-254-6. or: [KURILOVSKÁ, L.](#), [SVOBODA, I.](#), [BEŇUŠ, R.](#), [KRAJNÍKOVÁ, M.](#), [MASNICOVÁ, S.](#), [SAMEK, M.](#), [ŠIŠULÁK, S.](#); *Kriminalistika*. 1. vyd. - Bratislava: [Akadémia Policajného zboru, 2017](#). - 431 s. ISBN 978-80-8054-724-0.

²⁰ Meteňko, J., a kol. 2004. *Kriminalistické metódy a možnosti kontroly sofistikovanej kriminality*. Bratislava 2004. Akadémia PZ SR v Bratislave. ISBN 80-8054-336-4, EAN 9788080543365. 356 s., ss. 26 – 120.

²¹ Ivančík, R. 2022. *Bezpečnosť. Teoreticko-metodologické východiská*. Plzeň: Vydavatelství a nakladatelství Aleš Čeněk, 2022. 240 s. ISBN 978-80-7380-873-0

forensic science, or police sciences is often considered to be easily manageable even without the necessary university education due to their application level – Criminalistics and the other named branches are often referred to as practical sciences. For this reason, there is also an observable trend in Slovakia of those who decides on the saturation of the educational level in these areas, as part of the "rationalization of professional training", to reach for simpler, accelerated, and shortened forms of education and training, instead of thorough lifelong training. This is then reflected in the preference for courses and short-term forms of training "for a specific need", before higher education and training in the relevant level of higher education.

The second registered trend is a change in the proportionality of the relationship between related activities and the position in the cognitive process of criminal investigation.²² The historically preferred relationship between Criminalistic and criminal procedural law, reflected for example in Professor Solnař's statement: "Criminal science is the handmaiden of criminal procedural law", has long been the preferred approach of legal authorities who have significantly participated in the development of criminalistic. Currently, such an approach can also be observed in the concepts of investigative and criminal procedural practice in relation to the importance and necessity of knowledge of criminalistic and forensic sciences in relation to criminal law in the investigation process.²³ Due to the increase in the importance of the formal level of the investigation process, the fact that if there is a formal error in the evidence process, the entire investigation process is thwarted. Regardless of the quality of the content level of knowledge in evidence - which is provided by criminalistic and forensic sciences in the investigation. This is quite often also the reason they presented in their reactions to the importance and need of preferring the criminal-procedural training of investigators over criminalistic and forensic training.²⁴ This assumption leads to a significant decrease in interest in the study of criminalistic among subscribers of the educational process, as a content source.

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²² Chovanec, M. 2021: *Ontogenetické teórie vo forenznej psychológii*, Centrum polygrafických služieb, APZ, Bratislava, s. 112, 2021.

²³ [DRUGDA, J., BLATNICKÝ, J., VIKTORYOVÁ, J., VAJZER, L., ŠIMON, L. : \(2019\) Využívanie špecifických druhov dôkazných prostriedkov na účely vyšetovania obzvlášť závažnej trestnej činnosti](#) : Projekt vedecko-výskumnej úlohy. / Rieš. výsk. úl. Juraj Drugda, Spolurieš. Jaroslav Blatnický, Spolurieš. Jana Viktorová, Spolurieš. Ladislav Vajzer, Spolurieš. Ladislav Šimon. - 1. vyd. - Bratislava: [Akadémia PZ - K vyšetovania, 2019.](#) - 28 l. : 17 l. príl.

²⁴ [Blatnický, J., \(2022\) Niektoré osobitné postupy pri vyšetovaní.](#) In: *Aktuálne otázky teórie a praxe vyšetovania : Zborník vedeckých prác.* - Bratislava: Akadémia Policajného zboru, 2022. - S. 29-38.SLO

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