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Author(s)	Nenad Milić, Marija Popović – Mančević, Ivana Bjelovuk
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1. INTRODUCTION

In order to enhance the academic and professional education in the area of Safety & Security in Serbia, IMPRESS project seeks to establish a ''knowledge alliance'' comprised of EU universities and institutions in order to offer their educational infrastructure (curriculum, modules, courses) and best practices that can be used as a role model for improving current capacity of Serbian educational institutions.

This report provides overview of current educational programs (courses) offered by EU partners and Serbian faculties. The goal of this analysis is to compare these programs as well as to identify courses offered by EU consortium members which, if adopted, may achieve quality improvement of education in the area of safety and security in Serbia.

2. OVERVIEW OF THE INSTITUTIONS AND STUDY PROGRAMS WHICH WERE THE SUBJECT OF THE ANALYSIS

Faculty of Applied Security - EDUKONS University (UESK), Belgrade, Serbia
Program title: *The applied security*
Program degree: Bachelor's degree, Master's degree, Doctoral Degree

The applied security program is intended for those who want to be engaged in building of the safer society, who wants to apply their knowledge and skills in order to eliminate various types of threats in the area of terrorism and political violence, while simultaneously advocating respect for human rights and the principles of democratic society. *The applied security* program offers multidisciplinary knowledge in the fields of social, environmental and corporate security, as well as business and crime security.

The Academy of Criminalistic and Police Studies (ACPS), Belgrade, Serbia
Program title: *Criminalistics, Forensics and Informatics study programs*
Program degree: Bachelor's degree, Master's degree, Doctoral Degree

The Academy of Criminalistics and Police Studies was established by the Government of Serbia in 2006, after the reform of police education, and for the purpose of convergence with the EU standards. The Academy organizes and carries out: undergraduate and graduate studies in the area of criminalistics, forensic and information technologies.

Steinbeis University (SHB), Berlin, Germany
Program title: *Master program in risk engineering and management*
Program degree: Master's degree

Founded in 1998, Steinbeis University Berlin (SHB) is a state-approved private university that offers students and companies practice-oriented, extra-occupational higher education based on the project competence concept, leading to nationally recognized qualifications. The SHB portfolio of courses ranges from certification courses to degrees and doctoral programs. For the IMPREES project SHB offered the nine courses which are the part of their comprehensive *Master in Risk Engineering and Management*.

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Sant'Anna School of Advanced Studies (SSSA), Pisa, Italy
Program Title:
Program Degree: Bachelor's degree, Master's degree, Doctoral Degree

Sant'Anna School of Advanced Studies is a public university institute - with special autonomy - working in the field of applied sciences: Economics and Management, Law, Political Sciences, Agricultural Sciences and Plant Biotechnology, Medicine, and Industrial and Information Engineering. Sant'Anna was formally established with Law no. 41 of 14 February 1987. It is a special-statute public university located in Pisa, and it is part of the Pisa University System, together with the Scuola Normale Superiore and the University of Pisa. For the IMPREES project Sant'Anna School of Advanced Studies offered eight courses belonging to the field of safety and security. The majority of them are aimed for postgraduate levels (4 out of 8 belong to master level, 2 of them are both for master and Phd students and 1 course is only for PhD students), and one is aimed for bachelor level.

The Faculty of Security Studies (FS), Belgrade University, Belgrade
Program title: Security sciences studies
Program degree: Bachelor's degree

The Faculty of Security Studies is a graduate-level member institution of the University of Belgrade and belongs to the group of the humanities faculties. By its syllabus and curriculum, the Faculty covers interrelated philosophical, sociological, political, legal, economic, psychological, ethical, humanitarian, civilian-military, and other aspects of the security studies, defense studies, civil and environmental protection studies and human and social resources management studies. Within its core activity – the security studies, the faculty offers basic academic and undergraduate studies, Master degree studies, doctoral, and specialist undergraduate studies, as well as professional training and education.

Metropolitan University, Belgrade, Serbia (BMU)
Program title: Information technology
Program degree: Bachelor's degree, Master's degree

Metropolitan University, Belgrade, Serbia (BMU) educates future professional and etical leaders in Serbia and region. There are three faculties within Metropoliten University - Faculty of Information technology, Faculty for management and Faculty for digital art. Faculty of Information technology of Metropolitan University is accredited in the area of information systems and technical-technological scientific field. Faculty of Information technology of Metropolitan University was established in 2005 according to the Bologna declaration in educational system.

University of Stuttgart, Stuttgart, Germany (USTUTT)
Program degree: Bachelor's degree, Master's degree

The University of Stuttgart is located in Stuttgart, Germany. It was founded in 1829 and is organized into 10 faculties. It is one of the top nine leading technical universities in Germany with highly ranked programs in civil, mechanical, industrial and electrical engineering. The University of Stuttgart offers around 160 different Bachelor`s and Master`s study programs (Bachelor of science, Master of science, Bachelor of arts, Master of arts, Bachelor of fine arts teaching degree, Master of education teaching degree, Bachelor of arts

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teaching degree, Master of building physics, Gym PO Teaching degree and Master of business engineering in English and German languages.

The list of the courses of each Consortium member is shown in *Appendix 1* of this report.

3) FINDINGS

Analyzed study programs/courses cover different areas of safety and security, from risks stemming from acts of terrorism and crimes (eg. EDUKONS, KPA, UB-FB), different aspects of sustainability management which includes environmental management and energy and waste management and corporate security and corporate resilience (e.g. Sant'Anna), different aspects of risk management (e.g.USTUT), issues related to health, safety and security (SHP), IT security (Metropoliten).

Sant'Anna School of Advanced Studies' courses give the insights into the issues of *corporate security* and into *the ways corporations can improve social and corporate resilience and mitigate the risks in cases of emergencies and disasters (natural or man-made)*. The majority of courses are focused on international standards in the field courses cover, as the starting point and the prerequisite for further analysis of the problem. Sant'Anna School of Advanced Studies' courses can be used to improve Consortium members' study programs in areas that cover corporate risk assessment, corporate security and corporate resilience in disaster and emergency situations.

Courses offered by **Steinbeis University (SHB), Berlin** give insights into EU directives on industrial safety, major accident prevention, risk assessment methodologies, as well as International Standards of risk management and its application in industry. Also courses outline important EU regulation in the field of HSSE (Health, Safety, Security and Environment), including EU regulation in the field of safety and health of workers at work. EU regulation in the area of registration, evaluation and authorization of chemicals – REACH (EC Nr. 1907/2006) is also covered. Finally, SHB Berlin offered a course which explains accident and consequences modeling in industry, with strong emphasis on modeling of explosion, fire modeling and industrial fires.

The University of Stuttgart (USTUTT), Stuttgart, Germany offers bachelor`s and master`s study programs in the fields of science, art, education, etc. There is no one program named exactly safety and security but there are many of them which are related to these fields. The University of Stuttgart offers around 160 different Bachelor`s and Master`s study programs (Bachelor of science, Master of science, Bachelor of arts, Master of arts, Bachelor of fine arts teaching degree, Master of education teaching degree, Bachelor of arts teaching degree, Master of building physics, Gym PO Teaching degree and Master of business engineering in English and German languages. There are study programs Master of Acoustics, Aerospace Engineering (BSc and MSc), Air Quality Control, Solid Waste and Waste Water Process Engineering (MSc), Architecture and Urban Planning (BSc, MSc), Art History (BA, MA), Biology, Chemistry, Building Physics, Business Administration, Civil Engineering (BA, MA), Computational Linguistics (MSc), Computational Mechanics of Materials and Structures (MSc), Computer Science (MSc and BA), etc.

Study programs of the **Faculty for applied security, EDUKONS University** provide multidisciplinary knowledge in the fields of social, environmental and corporate security, as well as business and crime security. The general outcome of analyzed study programs is to provide scientific and practical knowledge on social and other forms and sources of risks that

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may endanger society. Besides providing insights into security and safety risks, EDUKONS' programs also provide insight into the way security system is organized, not only at national level, but at regional and international level too, including both proactive and reactive manner of its functioning.

Courses at the **Academy of Criminalistic and Police Studies** that belong to the field of safety and security cover different issues: risks stemming from acts of terrorism and crime, risks stemming from natural, technological and man-made disasters and environmental hazards, crisis management and protection systems for property and persons. Besides, some courses from this area cover the topics of methodology of intelligence work and intelligence and counterintelligence aspects of terrorism and antiterrorism as well as organizational aspects of security system that is dealing with various security threats.

Similarly to above described ACPS study program, courses taught at the **Faculty of Security (FS)** deal with security and safety issues, but there is some clear distinction in the way how much emphasis particular aspects get in each study program. FS approaches to the safety and security issues from the aspect of the science of security, offering a broad corpus of knowledge in this field, while ACPS fosters a somewhat broader legal and criminalistic approach to the study of criminality as a negative harmful phenomenon that endangers safety and is a challenge to achieve a viable degree of protection.

Metropolitan University, Belgrade, Serbia (BMU) Faculty of Information technology – Programs Information technology and Information systems is the only one which has study program in Bachelor`s degree in relation to the area of safety and security because there is one subject named *Protection and security of information (IT381)* in both programs of Bachelor's degree - 180 ESPB and 240ESPB. Metropolitan University, Belgrade, Serbia (BMU) - Faculty of Information technology – Program Software engineering **(Master's degree 60 ECTS)** has one subject in relation to the area of safety and security named *Secure software engineering (SE510)*. Study program in master`s degree Information security has four subjects related to the safety and security field: *Security of operating systems (CS471), Security of computer networks (CS472), Security of databases (CS574) and Secure software engineering (SE510).*

The Main School of Fire Service was established by a Polish law regulation of the Council of Ministers in January 18, 1982. According to the Act on the State Fire Service, the School also provides for future officers the opportunity to serve as trainees in the School Rescue and Firefighting Unit. MSFS's scientific and academic activity is carried out at two faculties: the Faculty of Fire Safety Engineering and Faculty of Civil Safety Engineering. MSFS graduates receive the title of the Safety Engineer in fire safety and civil safety.

5) RECOMMENDATIONS

5.1. New courses that can improve study programs related to safety and security in Serbian education institutions

International standardization in the area of risk management (ISO 31000:2009, ISO 31010:2009)

Risks affecting organizations can have consequences in terms of economic performance and professional reputation, as well as environmental, safety and societal outcomes. Therefore, managing risk effectively helps organizations to perform well in an environment full of uncertainty. ISO 31000:2009, *Risk management – Principles and*

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guidelines, provides principles, framework and a process for managing risk. It can be used by any organization regardless of its size, activity or sector. Using ISO 31000 can help organizations increase the likelihood of achieving objectives, improve the identification of opportunities and threats and effectively allocate and use resources for risk treatment. ISO 31000 is supported by IEC/ISO 31010:2009 standard, offering information regarding selection and application of appropriate risk assessment techniques.

Educational studies program in Serbia lacks content regarding ISO standardization in the area of Risk management, so embedding such course content in existing curricula may mean significant quality improvement.

Possible EU contributor(s):
- Steinbeis University (SHB), Berlin, Germany

Public Health Oriented Risk Analysis

Different security threats may have serious consequences on public health (e.g. hazardous materials spills, industrial accidents, pandemic influenza, bioterrorism etc.). Assessment of public health risks from any type of hazard, whether naturally occurring or as a result of an accident or deliberate release, requires existence of systematic process for gathering, assessing and documenting relevant information. It provides the basis for taking action to manage and reduce the negative consequences of public health risks. Having in mind the importance of this aspect of safety and security, educational programs in Serbia may be improved with the contents that explains different phases of public health risk management cycle that starts with a) risk assessment — hazard, exposure and context assessment and risk characterization in which the level of risk is assigned to the event b) identification of potential control measures — ranked by priority, taking into account likelihood of success, feasibility of implementation and unintended consequences for the affected population and society more broadly c) continuous monitoring and evaluation as the event unfolds d) effective ongoing communication to ensure that risk managers, other stakeholders and affected communities understand and support the control measures that are implemented and d) an evaluation of lessons learned at the end of the response.

Possible EU contributor(s):
- Steinbeis University (SHB), Berlin, Germany

Incident Command Systems and Crisis management

In the case of the emergency situations good communication and coordinated response is a prerequisite of efficient and effective response. Communication flow must be directed to the place (e.g. incident command centre) where the situation will be assessed, objectives established, resources collected and organized in order to be put into the action. Based upon collected information a strategy or plan for handling the incident should be created, its effect should be closely monitored and adjusts the plan as needed. Besides these there are other issues that must be taken into account while handling crisis (who will provide information to the public, liaisoning with other agencies etc.). European standards and best practices regarding to operational responding to critical incidents may improve educational programs in the area of safety and security especially those focused on the management issues regarding incident response. Also contents regarding decision making support approaches (systems) for Risk Management should be presented.

Possible EU contributor(s):
- ATRISC company, France;
- The Main School of Fire Service Warsaw, Poland;
- The University of Stuttgart (USTUTT), Germany.

Critical Infrastructure Management

Facilities such as power generation plants, telecommunication exchange stations, and water supply facilities play an important role in maintaining the stability of society worldwide. The protection of these critical infrastructures become highly challenging to both public and private organizations because it requires synergy across intelligence, protection, and resilience activities. Hence safety and security educational programs in Serbia may benefit from course content that explains challenges and opportunities associated with infrastructure protection related public-private partnerships, information-sharing, risk analysis, risk mitigation and protective practices and measures to ensure that critical infrastructure is operational and recoverable following an attack or disaster. Special attention should be paid to practical application of critical infrastructure security and resilience from an all-hazards perspective.

Possible EU contributor(s):
- The Main School of Fire Service Warsaw, Poland;

The use of geospatial technology in emergency situations

The aim of the course is to provide students with basic theoretical and practical knowledge of geospatial information technologies, including the best practice of their use before, during and after emergency situation. Pre-disaster applications are associated with mitigation and preparedness efforts. Mitigation refers to activities that reduce the vulnerability of societies to the impacts of a disaster, while preparedness refers to activities that facilitate preparation for responding to a disaster when it occurs. Post-disaster applications are associated with response and recovery efforts. Post-disaster applications are associated with response and recovery efforts. The course should cover contents related to spatial data (different types, sources, resolution etc.), remote-sensing (RS), Global Navigation Satellite System (GNSS), Geographic Information System GIS, UAV including the way they can be integrated in emergency situations.

Possible EU contributor(s):
- The Main School of Fire Service Warsaw, Poland;

Modeling and simulation of security threats

Introduction to the usage of statistical and metamatic and physical models in the area of safety and security. The course will cover contents regarding: modeling theory, tools, methods, modeling techniques, model classification, statistical models in security modeling, mathematical - physical models of threats, fire modeling, simulation of evacuation. The course will entail the practical use of relevant software.

Possible EU contributor(s):
- The Main School of Fire Service Warsaw, Poland;
- Steinbeis University (SHB), Berlin, Germany

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5.2) The possibilities of improving existing courses within Serbian educational institutions by implementing additional contents

ISO standards in the area of environmental protection

Study programs of different Serbian institutions contain courses related to Environmental safety (e.g. KPA, EDUKONS, FB-UB). Theses contents can be improved if they are extended with the contents regarding international standards in the area of environmental protection. For example, the ISO 14000 family of standards provides practical tools for companies and organizations of all kinds looking to manage their environmental responsibilities. In accordance with previously stated, "*Environmental Management System*" course offered by Sant'Anna School of Advanced Studies introduces specific standard ISO 14001: 2015 that must be in use in order to enhance managing, control and overall improvement of environmental performances of an organization. Benefits deriving from the application of this standard are twofold: first, it would increase business performance, profitability and improve corporate image, and second, nature will be more protected. This standard must be part of "Environmental Security" course because it will help to identify and involve local and key stakeholders in order to engage them and to reduce, or better handle, the negative local perceptions.

Possible EU contributor(s):
- Saint'Anna, Pisa, Italy (suggested course: *Environmental Management system - ISO 14001: 2015*)

Technology, information, communication techniques and business continuity plans in disaster management

Some of the study courses are dealing with natural crisis and disaster management (EDUKONS, KPA), but they can be improved by a holistic approach in dealing with natural crisis that includes developing Business Continuity Plan that contains information on how to involve employees or key stakeholders in the process, including usage of Geographic Information Systems (GIS), big data, or mobile technologies to manage a disaster. Besides, the role of communication in crisis is highly important in case of natural disasters caused either by flood, or fire or earthquake etc when communication is difficult or even impossible. This amelioration of courses with new content regarding communication aspects and business continuity altogether with technology and information can help improve organizational skills necessary for dealing with natural disaster.

Possible EU contributor(s):
- Sant'Anna, Pisa, Italy (suggested course: *Natural Disaster Management: business continuity and communication techniques*).
- The Main School of Fire Service Warsaw, Poland (suggested courses: *Critical communication in crisis situations, Spatial information systems*).
- The University of Stuttgart (USTUTT), Stuttgart, Germany (suggested course: *Risk Perception and Risk Communication*).

Safety cost analysis and measuring of sustainability performance

Some of the members of the Consortium already have developed courses on advanced management of some types of risks, like financial risks (EDUKONS), so this course can be

improved by adding a new content regarding methods and instruments for the economic evaluation of costs of safety lack and by their comparison with the value of investments in prevention. These improvements can be useful for easier risk assessment and further preventive measures.

Possible EU contributor(s):
- Sant'Anna, Pisa, Italy (suggested course: *Sustainability performance measurement (sustainability reporting and safety cost analysis)*).
- The University of Stuttgart (USTUTT), Stuttgart, Germany (suggested course: *Integrated Corporate Responsibility and Sustainability*)

Vulnerability assessment on the basis of socio-economic and environmental risky issues

Some members of the Consortium have already developed different courses that are dealing with risk analysis (e.g. FS, ACPS), but these courses can be improved with additional elements like vulnerability assessment that include indicators like territorial context and socio-economic and environment factors. These courses can be enriched with tools to identify, manage and monitor local socio-economic and environmental issues that can cause risks and threats.

Possible EU contributor(s):
- Sant'Anna, Pisa, Italy (suggested course: *Sensitivity Analysis of Territorial Context: identification and Evaluation of Local socio-economic and Environmental Risky Issues*).

Occupational Health and Safety

Having in mind Serbia's current effort towards EU integration, there is a need to enhance study programs with contents regarding EU regulations in the field of safety and health of workers at work. Presented topics should include general principles concerning the prevention of occupational risks, the protection of safety and health, the elimination of risk and accident factors, general guidelines for the implementation of these principles as well as informing, consultation and balanced participation in accordance with national laws and/or practices. The course also discusses the training of workers and their representatives.

Possible EU contributor(s):
- Steinbeis University (SHB), Berlin, Germany (suggested course: *Occupational Safety and Health*
- Sant'Anna School of Advanced Studies, Italy (suggested course: *Occupational Health and Safety (OHSAS 18001)*)

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Appendix 1

List of analyzed courses delivered at IMPRESS Consortium institutions			
Institution name	**Bachelor level**	**Master level**	**PhD level**
EDUKONS UNIVERSITY (Faculty of Applied Security)	▪ Business ethics ▪ Basics in law ▪ Basics of economics ▪ Informatics ▪ English I ▪ Basics of security ▪ Economy of the European Union ▪ Principles of management ▪ English II ▪ Criminal Law ▪ Crisis management ▪ Human resource management ▪ Applied Security ▪ Ecological crime ▪ Emergency management ▪ Sustainable Development Management ▪ Criminal Law ▪ International relations/affairs ▪ Criminology with penology ▪ Ecological security ▪ Marketing ▪ Physical Chemical basics of forensic ▪ Natural phenomena and disasters ▪ Biochemical basics of forensics ▪ Corporate security ▪ Instrumental methods in forensics ▪ Fundamentals of energy effeciency ▪ Project management ▪ Health and Safety at work	▪ System of national security ▪ Monitoring of natural processes ▪ Decision theory ▪ Industrial Safety ▪ Criminal methodology ▪ Energy security ▪ Risk management ▪ Critical Infrastructure Management ▪ Methodology of scientific work ▪ Victimology ▪ Technical systems of security and protection ▪ Strategic Management ▪ Change Management ▪ Conflict Management	▪ Integrated security systems ▪ Modern management theory in corporate security ▪ Energy efficiency and Security Systems ▪ Environmental aspects of the national security system ▪ Introduction to Doctoral Dissertation ▪ Contemporary planning systems and crisis management ▪ Managing in criminal investigations ▪ Globalization of world politics ▪ Methods and methodology of intelligence work ▪ Medical protection of human resources in emergency situations ▪ Security project management ▪ Intelligent protection of modern economic development ▪ Advanced management of financial risks

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	▪ Strategic Management		
Academy of Criminalistics and Police Studies - KPA	▪ Introduction to law ▪ Constitutional law ▪ Basics of informatics ▪ Criminal Law I & II ▪ English I ▪ Sociology and social patology ▪ Basics of economy ▪ Technical resources used by police ▪ Special physical education ▪ Criminalistics tactics ▪ Misdemeanor law ▪ Criminology ▪ The basics of criminal procedure law ▪ National history of the state and law ▪ Criminalsitics' technique ▪ Organisation and duties performed by police organisation ▪ Administrative law ▪ English II ▪ Criminalistics methodic ▪ National security ▪ Internal affairs law ▪ Police informatics ▪ Victimology ▪ Community policing ▪ Police ethics ▪ Traffic safety ▪ Ecological safety ▪ Human rights ▪ Police tactics ▪ Police topography ▪ Criminalistics' medicine ▪ Safety in emergency situations ▪ Prevention and Suppression of Fires,	▪ Methodology of scientific research ▪ Police and human rights ▪ International criminal law ▪ Crime profiling ▪ Victimology ▪ Human resource and material resource management ▪ High-tech crime ▪ Therorism and political violence ▪ Crisis management ▪ Bioterrorism GRADUATE SPECIALIST STUDIES: ▪ Security Systems ▪ Phenomenology of Security Threats ▪ Comparative models of security protection of persons and property ▪ Endangering persons, property and business ▪ Intelligence and Counterintelligence aspects of Terrorism and Antiterrorism	▪ Methodology of scientific research ▪ Criminology ▪ Criminal law ▪ Criminalistics ▪ Intenrational human rights ▪ Law and economy of the public sector ▪ Police management ▪ Decision making support in police organisation ▪ Contemporary security studies ▪ Safety in emergency situations ▪ Criminalistics and combating contemporary crimes ▪ Criminalistics' analytics

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	Accidents and Explosions ■ Crime prevention ■ International public law ■ Public finance ■ Psychology of crime ■ Property and persons protection system ■ The role of the police in criminal procedure ■ Security management ■ Organized crime ■ Police control and traffic regulation ■ Illegal migrations and trafficking in human beings ■ Risks management in the protection and rescue system ■ Biometrical identification ■ International police cooperation ■ Methodology of intelligence work ■ Financial crime ■ Crime mapping ■ International security ■ Human Security		
Steinbeis University Berlin (Master Study Program in Risk Engineering and Management*)		■ Introduction to Risk Management ■ Business Communication and Management of Intercultural differences ■ Principles and Methods of ISO 31000 ■ Health, Safety, Security and Environmental Risks ■ Occupational Safety and Health ■ Public Health Oriented Risk Analysis ■ Principles and Methods of ISO 31010 ■ Risk Analysis of Chemicals ■ Accident and Consequences Modeling	
Sant'Anna School of Advanced	■ Sustainability management (basic	■ Occupational Health and Safety	■ Sustainability management (advanced

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Studies, Pisa, Italy	course)	(OHSAS 18001) ▪ Environmental Management system (ISO 14001: 2015) ▪ Sustainability management (advanced course) ▪ Sustainability performance measurement (sustainability reporting and safety cost analysis) ▪ Sensitivity analysis of territorial context: identification and evaluation of local socio-economic and environmental risky issues ▪ Social Accountability (SA8000)	course) ▪ Natural crisis and disaster management: business continuity and communication techniques ▪ Sensitivity analysis of territorial context: identification and evaluation of local socio-economic and environmental risky issues
University of Stuttgart (USTUTT), Stuttgart, Germany		▪ Risk Governance Concepts and Practices- ▪ Integrated Corporate Responsibility and ▪ Sustainability ▪ Risk Perception and Risk Communication ▪ Emerging Risks ▪ Quality Management ▪ Project Management ▪ Innovation Risk Management ▪ Decision Aid Approaches for Risk Management	
Faculty of Security, Belgrade Serbia	▪ Sociology ▪ The basics of security ▪ Legal basics of security ▪ The basics of ecology ▪ Psychology ▪ Conflict theories ▪ Introduction to management ▪ Introduction to security studies ▪ Ethics		

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	▪ English I, ▪ Political system ▪ Security systems ▪ International relations ▪ The basics of geopolitics ▪ Informatics ▪ Protection and rescuing system ▪ Theory and organization of education ▪ Defense systems ▪ English II ▪ Criminal law ▪ Civil defense system ▪ Criminology ▪ Civil protection ▪ Serbian contemporary history ▪ Public international law ▪ Civil - military relations ▪ Environmental protection ▪ Security management ▪ Methodology of scientific research ▪ Crisis management ▪ Social pathology ▪ Terrorism and organized crime ▪ Security and protection systems ▪ Criminalistics ▪ Projecting of data protection system ▪ Information security ▪ Criminal procedure law ▪ Victimology and penology ▪ Applied ethics ▪ Educational management in public sector ▪ Human security ▪ Media and communications ▪ Projecting and planning in security sector		

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	- Corporate security - Social psychology - Strategic management of human and social resources - Security and occupational safety - Management in protection systems - Environmental security - Industrial security and protection - Monitoring in protection - Health and social protection - Spatial planning and protection - Crisis management in emergency situation - Intelligence systems - Logistics in the national defense system - Sociology of politics - Diplomacy and defense - The defense law - Management in the defense system - War ethics		
BELGRADE METROPOLITEN UNIVERSITY (BMU) FACULTY OF INFORMATION TECHNOLOGY **Study program Information technology**	180ECTS - Introduction in objectively oriented programming - Basics in information technology - Mathematics for IT - English 1 - Objects and abstraction of data - Systems of information technology - C/C++ program language - English 2 - Computer networks and communications - Architecture of computer - Data bases - English for IT - Web systems1	**MAS Security of information:** - Cryptography and crypto technologies - Operating system security - Computer network security - Analysis of advanced algorithms - Computer forensics - Final paper - Database Security - Secure Software Engineering	

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- Interaction of man and machines
- Operation systems
- Scripting languages
- Web systems 2
- Protection and security of information
- Professional practice
- Professional communication
- Administration of computer systems and networks
- Professional practice and ethics
- Business economy
- Discrete structures
- Programming in C#
- Developing of mobile applications
- Managing of projects for developing software

240 ECTS
- Introduction in objectively oriented programming
- Basics in information technology
- Mathematics for IT
- English 1
- Objects and abstraction of data
- Systems of information technology
- C/C++ program language
- English 2
- Computer networks and communications
- Architecture of computer
- Data bases
- English for IT
- Web systems1
- Interaction of man and machines
- Operation systems
- Scripting languages
- Introduction in software engineering

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	▪ Administration of computer systems and networks ▪ Web systems2 ▪ Managing of projects for developing software ▪ Distributed systems ▪ Protection and security of information ▪ Developing of mobile applications ▪ C# program language ▪ Discrete structures ▪ Professional practice ▪ Professional practice and ethics ▪ Professional communication ▪ Quality management ▪ Basics in information technology		
BELGRADE METROPOLITEN UNIVERSITY (BMU) FACULTY OF INFORMATION TECHNOLOGY **Study program Computer games**	▪ Introduction to Object-Oriented Programming ▪ Computer Architecture ▪ Mathematics for IT ▪ English 1 ▪ Objects and abstraction of data ▪ C / C ++ programming language ▪ Discrete structures ▪ English 2 ▪ Algorithms and data structures ▪ Introduction to Software Engineering ▪ Graphic Design Basics ▪ English for informatics ▪ Introduction to computer games ▪ Development of mobile applications ▪ Design and Game Mechanics ▪ Visual narration and dramaturgy of computer games ▪ Operating Systems ▪ Production of video games		

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	- Game Development 1 - Artificial intelligence in games - Databases - Software Development Management Software - Game Development 2 - Human-computer interaction - Development of character and environment for video games 3D modeling - Maya - Professional Practice - Computer Games (4 Months) - Distributed Systems - Programming in C # - Professional practice and ethics - Professional communication - User Interaction and Testing Games - Software environments for the development of computer games - Entrepreneurship - Team development of computer games - Game Development 2 - Final work		
BELGRADE METROPOLITEN UNIVERSITY (BMU) FACULTY OF INFORMATION TECHNOLOGY **Study program Software engineering**	- Introduction in objectively oriented programming - Architecture of computer - Mathematics1 - English1 - Objects and abstraction of data - C/C++ program language - Discrete structures - English 2 - Algorithms and structures of data - Introduction of software engineering - Data bases	- Development of large software systems - Evaluation and measurement of software - Agile Development Software - Software development for embedded computing systems - Intelligent Software Systems - Professional practice - Final work - Advanced e-learning systems - Semantic Web Technologies	- Methodology of scientific research work - Models of software systems - Architecture of software systems - Research project 1 - Research project 2 - Research project 3 Independent research work on the preparation of doctoral dissertations - The use of semantic web technology in the public sector - Research of e-learning systems - Systems in real time and embedded

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	▪ English for IT ▪ Web systems 1 ▪ Interaction of man and machine ▪ Software design ▪ Mathematics 2 ▪ Web systems 2 ▪ Providing of quality, testing and service of software ▪ Projecting and architecture of software ▪ Engineering of demand ▪ Managing of projects for developing software ▪ Operating systems ▪ Developing of mobile applications ▪ Scripting languages ▪ Probability and statistics ▪ Managing of business processes ▪ Professional practice ▪ Programming in C# ▪ Business economy ▪ Professional practice and ethics ▪ Professional communication ▪ Protection and security of information ▪ Distributed systems ▪ Entrepreneurship team development of software ▪ Modern technology platforms	▪ Secure Software Engineering	systems ▪ Testing and quality of software ▪ Serious games and simulations in real time ▪ Experimental computing ▪ Software for Real Time Systems and Embedded Systems Research in software engineering ▪ Artificial intelligence
BELGRADE METROPOLITEN UNIVERSITY (BMU) FACULTY OF INFORMATION TECHNOLOGY Study program Information systems	▪ Basics of information systems ▪ Management Basics ▪ Introduction to Operations Management ▪ Fundamentals of Information Technology ▪ English 1 ▪ Application Development ▪ Analysis and design of business	▪ Models of business organization ▪ Analysis, Modeling and Design IS ▪ Advanced IT Infrastructure ▪ Advanced Database ▪ Business Intelligence ▪ Professional practice ▪ Final work ▪ Methodology for Business Process	

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	processes ▪ Information Technology Systems ▪ Mathematics for Managers ▪ English 2 ▪ Databases ▪ MK110 Business Economy ▪ Business statistics with probability ▪ English for informatics ▪ IT infrastructure ▪ Human-computer interaction ▪ Business finance with accounting ▪ Business Process Management ▪ Project Management ▪ System Analysis and Design ▪ IT System Architecture Organization ▪ Digital Content Management ▪ Information Systems Organization ▪ Strategy and Information Systems Management ▪ Business Process Management ▪ Scripting languages ▪ Public Finance ▪ IT system audit and control ▪ Professional Practice (2 months) ▪ Information Systems Development Project ▪ Final work ▪ C # Programming language ▪ Managing organizational changes ▪ Computer Architecture ▪ Introduction to Object - Oriented Programming ▪ Quality Management ▪ International Business ▪ Elective course 5:	Management ▪ IT Project Management	

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	▪ Business Intelligence ▪ Logistics and Supply Chain Management		
BELGRADE METROPOLITEN UNIVERSITY (BMU) FACULTY OF MANAGEMENT Study program Business and Marketing	▪ Management Basics ▪ Basics of information systems Introduction to Operations Management ▪ Principles of Marketing ▪ English 1 ▪ Business accounting with accounting ▪ English 2 ▪ Development of new products ▪ Sales principles ▪ Integrated Marketing Communications ▪ Business Economics ▪ Business statistics with probability ▪ English for Managers ▪ Advertising ▪ Human Resource Management ▪ Business law ▪ Sales Management ▪ Marketing research ▪ Project Management ▪ Public Relations ▪ Consumer Behavior ▪ Digital Marketing ▪ Entrepreneurship ▪ Business Law ▪ Marketing Management ▪ Brand Management ▪ Strategic Management ▪ International Business ▪ Professional Practice ▪ Elective module 1 module MK: ▪ Marketing Planning ▪ Managing organizational changes	**MAS Marketing management** ▪ Strategic marketing ▪ Comunications and public relation ▪ Marketing management – advanced level ▪ Trade management – advanced level ▪ Brend management - advanced level ▪ Advertisement Project of market research Negotiation and lobbying ▪ Final work	**Marketing management** ▪ Methodology of scientific research ▪ Policy and development strategy ▪ Innovation management and entrepreneurship ▪ Research project 1 ▪ Research project 2 ▪ Knowledge Economy and National Innovation System ▪ Strategic management – advanced level ▪ Behavior of a consumers ▪ Research and modeling of integrated market communications Economic analysis and business intelligence ▪ Marketing management ▪ Business strategy ▪ Strategic brand management ▪ Managing of satisfaction of byers

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	▪ Elective module 2 module MK: ▪ Business in sport ▪ Management of service processes ▪ Marketing campaign project ▪ Management of special and media events ▪ Final work		
BELGRADE METROPOLITEN UNIVERSITY (BMU) FACULTY OF MANAGEMENT Study program Engineering and operational management	▪ Management Basics ▪ Basics of information systems ▪ Introduction to Operations Management ▪ Principles of Marketing ▪ English 1 ▪ Business finance with accounting ▪ English 2 ▪ Analysis and design of business processes ▪ Mathematics for Managers ▪ Development of new products ▪ Business Economy ▪ Business statistics with probability ▪ English for Managers ▪ Production planning and management ▪ Human Resource Management ▪ Business Process Management ▪ Logistics and Supply Chain Management ▪ Management of service processes ▪ Dramaturgy of video games ▪ Operating Systems ▪ Project Management ▪ Modeling and designing companies ▪ Quality Management ▪ Design of drives and layouts ▪ Entrepreneurship ▪ Business Ethics and Communication ▪ System modeling and optimization ▪ Elective course 1:		

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	▪ Information Systems Organization ▪ Maintenance Management ▪ Elective Course 2: ▪ Distributed Systems ▪ Programming in C # ▪ Improve operations ▪ Operation strategy ▪ Elective Course 3: ▪ Managing organizational changes ▪ International Business ▪ Elective course 4: ▪ Business Law ▪ Sales Management ▪ Professional practice ▪ Final work		
METROPOLITEN UNIVERSITY (BMU) **FACULTY OF MANAGEMENT** **Study program Management in sport**	▪ Management Basics ▪ Basics of information systems ▪ Introduction to Operations Management ▪ Principles of Marketing ▪ English 1 ▪ Business accounting with accounting ▪ English 2 ▪ Marketing in sport ▪ Introduction to a sports manager ▪ Sports history ▪ Business Economy ▪ Business statistics with probability ▪ English for Managers ▪ Management of sports facilities ▪ Human Resource Management ▪ Sales Management ▪ Business Ethics and Communication ▪ Principles of training in sport ▪ Project Management		

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	- Public Relations - Consumer Behavior - Digital Marketing - Entrepreneurship - Business Law - Management of sports organizations - Sports Event Management - Strategic Management - International Business - Management of special and media events - Professional sport - Advertising - Digital Content Management - Sports Safety Management - Brand Management - Sales principles - Business in sport - Professional Practice - Final work		
METROPOLITEN UNIVERSITY (BMU) **FACULTY OF DIGITAL ART** **Study program Graphic design**	- Drawing 1 - Letter - Design history - Graphic Design Basics - English 1 - Drawing 2 - Typography - Graphic Design Processes and Techniques History of Art of the Old and Middle Ages English 2 - Drawing and stylization shapes - Corporate Identity - Graphic Design 1 - Digital Photography - English for Designers - Graphic Design 2		

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	- Visual Identity - Art form - Visual culture - The history of art of the new century - Illustration - Web Design 1 - Design Publications 1 - History of Modern and Contemporary Art - Design Publications 2 - Packaging Design 1 3D modeling - Digital communications - Packaging Design 2 - Compositing in graphic design - Visual Culture Theory - Introduction to animation - Interactive Media 1 - Digital Illustration - Digital communications - Animated graphics - Web Design 2 - Portfolio - Professional practice for DG - Final work		
METROPOLITEN UNIVERSITY (BMU) **FACULTY OF DIGITAL ART** **Study program Design of interactive media**	- Drawing and painting - Introduction to animation - Design history - Basics of Graphic Design - English 1 - Computer animation - Typography 1 - Drawing 2 - History of Art of the Old and Middle Ages	- MAS Design of new media - Motion graphics 3D modelling and animations - Advanced video compositing - Design of mobile applications - Design of interaction and user experience - Programing of interactive applications	

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	- English 2 - Interactive Media 1 - Dramaturgy - Web Design 1 - Digital Photography - English for Designers - Interactive Media 2 - Web Design 2 - Animated graffiti - The history of art of the new century - Drawing and stylization shapes - Video production technology - History of Modern and Contemporary Art - Sound Dramaturgy - Animation 1 - Recording and sound design - Visual culture - Introduction to computer games - Digital communications - Human-computer interaction - Visual Effects - Digital Video - Production of video games - Visual Culture Theory - Fundamentals of Information Technology - History of Modern and Contemporary Art - Recording and sound design - Visual narration and dramaturgy of computer games - Entrepreneurship - Web Systems 1 - Development of character and		

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	environment for video games ▪ Human-computer interaction ▪ Scripting languages ▪ Visual Identity ▪ Portfolio ▪ Professional practice for DIM ▪ Final work		
METROPOLITEN UNIVERSITY (BMU) **FACULTY OF DIGITAL ART** **Study program Fashion design**	▪ Drawing 1 ▪ Basics of modern dressing 1 ▪ Costume Design 1 ▪ Graphic Design Basics ▪ English 1 ▪ Drawing 2 ▪ Basics of modern dressing 2 ▪ Graphic Design Processes and Techniques ▪ Anatomical drawing ▪ English 2 ▪ Tailoring and sewing 1 ▪ Costimography 2 ▪ Drawing and stylization shapes ▪ Digital Photography ▪ English for fashion design ▪ Textile Design 1 ▪ Tailoring and sewing 2 ▪ Fashion Design 1 ▪ Art form ▪ Anatomical drawing ▪ Fashion Design 2 ▪ Textile Design 2 ▪ Illustration ▪ Design and modeling of clothing 1 ▪ Fashion Design 3 ▪ 3D fashion design ▪ The history of art of the new century		

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	- Design and modeling of clothing 2 - Fashion Techniques - Design history - Fashion Design 4 - Professional Practice for MD - Design Publications 1 - Graphic Design 1 - Design and modeling of clothing 2 - Visual Identity - Fashion marketing - Fashion illustration - Portfolio - Finishing work - fashion design	