Armed Forces Academy
of General Milan Rastislav Štefánik
Demänová 393, 031 06 Liptovský Mikuláš

ERASMUS offer for incoming students

Department	Mechanical Engineering
Subject/ title	Barrel and design small calibre weapons
Credits	4 ECTS
Hours	30
Level (Bachelor/master)	Bachelor/Master
Tutor(s)	Assoc. Prof. M. E. Peter LISÝ, Ph.D.
Exam type	Written exam (test)
Description	The aim of this subject is to provide for students the basic principles barrel and small caliber weapons design.
Teaching Content	History of small calibre weapons Combat requirements for small calibre weapons Functional cycle of small calibre weapons Fundamentals of design small calibre weapon Practical view of couple small calibre weapons
Reading materials	[1] CARLUCCI, E. D., JACOBSON, S. S.: *BALISTICS, Theory and Design of Gun and Ammunition*. Taylor & Francis Group, 2014. ISBN9781466564374 [2] *POPENKER, M., WILLIAMS, A.: Sub-Machine Gun. The development of submachine guns and their ammunition from World War I to the present day. The Crowood Press, 2011. ISBN 978-1-84797-293-4.* [3] *CUTSHAW, CH.: Tactical Small Arms of the 21st Century. Gun Digest Books, 2006* [4] *POPENKER, M., WILLIAMS, A.: Assault Rifle.The Crowood Press Ltd, Ramsbury 2005.* [5] PETER, H.: *Armament Engineering*. Trafford, 2003. ISBN9781412002417
Remarks	Only for student with mechanical background. Difficulty will be modied for study level.

Armed Forces Academy
of General Milan Rastislav Stefanik
Demanova 393, 031 06 Liptovsky Mikulas

ERASMUS offer for incoming students

Department	Mechanical Engineering
Subject/ title	Combat Vehicles
Credits	4 ECTS
Hours	30
Level (Bachelor/master)	Bachelor/Master
Tutor(s)	prof. Dipl. Eng. Peter DROPPA, Ph.D.
Exam type	Written exam (test) + presentation.
Description	The aim of this subject is to provide students with the common understanding of the principles, theory and construction combat vehicles. As well as to make them able to get a basic overview on development trends of combat vehicles.
Teaching Content	The forces and torques acting of combat vehicles. General arrangement of combat vehicles. Protection of combat vehicles. Transmission mechanisms of combat vehicles. Chassis mechanism of combat vehicles. Development trends of combat vehicles.
Reading materials	**DROPPA, P**. - ŠTIAVNICKÝ, M.: Modeling of kinematic and strength relations in mobile technics: scientific monograph - 1. vyd. - Liptovský Mikuláš: Armed Forces Academy of General Milan Rastislav Štefánik, 2012. - 126 s. - ISBN 978-80-8040-455-0. **DROPPA, P:** Analysis of systems track vehicles chassis springing, Liptovský Mikuláš, AOS 2006, 85strán. [Monograph]. ISBN 80-8040-279-5. BOTTEGA, W. J.: Engineering vibration, Taylor & Francis Group, Boca Raton, USA. 2006. ISBN 0-8493-3420-9.
Remarks	Only for student with mechanical background.

Armed Forces Academy
of General Milan Rastislav Stefanik
Demanova 393, 031 06 Liptovsky Mikulas

ERASMUS offer for incoming students

Department	Department of Informatics
Subject/ title	Computer Languages and their Processing
Credits	4 ECTS
Hours	30
Level (Bachelor/master)	Master
Tutor(s)	doc. RNDr. Ľubomír Dedera, PhD.
Exam type	Written/oral
Description	The goal of this course is to introduce students to the theory of formal languages and grammars and their utilization for the description of syntax of computer languages. Next the students learn the principles and algorithms of lexical, syntactic, and semantic processing of computer (programming) languages.
Teaching Content	Formal languages and grammars Regular languages and finite automata Context-free languages and pushdown automata Compiler structure Lexical analysis Syntactic analysis (parsing) Fundamentals of semantic processing Processing of typical constructs of programming languages
Reading materials	FISCHER, J. - LeBLANC, R: Crafting a Compiler with C. Benjamin-Cummings Publishing Co., New York, 2002. DEDERA, Ľ.: Počítačové jazyky a ich spracovanie. Vysokoškolská učebnica. Akadémia ozbrojených síl, 2014. (in Slovak)
Remarks	Prerequisites: • Knowledge of an arbitrary programming language • Basic orientation in algorithms and data structures.

Armed Forces Academy
of General Milan Rastislav Stefanik
Demanova 393, 031 06 Liptovsky Mikulas

ERASMUS offer for incoming students

Department	Security and Defence Department
Subject/title	Crisis Management
Credits	4 ECTS
Hours	20
Level (Bachelor/master)	Bachelor
Tutor(s)	Ing. Ivan MAJCHÚT, PhD. Ing. Vladimír ANDRASSY PhD.
Exam type	Semester study and its advocacy
Description	The goal of the subject is to clarify the issue of crisis and crisis situations, describe the functions of crisis management, explains the use of the Armed Forces during crisis management.
Teaching Content	- Crisis management – basic concepts (terms) - Crisis management – functions, crisis situations - Emergency Units and materials (reserves) for Crisis management - Crisis situations, crisis scenarios – crisis plan for solutions - Role of the Armed Forces during crisis management
Reading materials	1. Peace Operations of International Crisis Management. Ivančík, R., Jurčák, V., Marki: Mazowieckie Centrum Poligrafii 2013, ISBN 978-83-936652-6-6. 2. Command and Control in Military Crisis. Hoiback, H., London: Frank Cass Publishers 2003. ISBN 0-7146-5490-6. 3. International Crisis Management: The Approach of European State. Houben, M., London New York: Routledge 2005, ISBN 0-415-35455-2. 4. Crisis management in public administration. Crisis management I., Theory of crisis management. Šimák, L., Hollá, K., Ristvej, J., EDIS Žilina 2013, ISBN 978-80-554-0651-0.
Remarks	

Armed Forces Academy
of General Milan Rastislav Stefanik
Demanova 393, 031 06 Liptovsky Mikulas

ERASMUS offer for incoming students

Department	Physical Education
Subject/ title	Military physical training
Credits	2 ECTS
Hours	30
Level (Bachelor/master)	N/A
Tutor(s)	
Exam type	Physical test
Description	This course provides knowledge of basic training methods and techniques, with an emphasis on developing and preserving levels of physical fitness required to carry out physical training activity. The course also provides students with the basic knowledge and tools needed to develop the physical and psychological strength required for stressful military training activity such as survival training for adverse situations. Civil students obtain knowledge of training methods and techniques without military training activities.
Teaching Content	Military – practical swimming, climbing, self defence and physical training.
Reading materials	
Remarks	

Armed Forces Academy
of General Milan Rastislav Stefanik
Demanova 393, 031 06 Liptovsky Mikulas

ERASMUS offer for incoming students

Department	Security and Defence Department
Subject/ title	National Security
Credits	4 ECTS
Hours	20
Level (Bachelor/master)	Bachelor
Tutor(s)	prof. Ing. Vojtech JURČÁK, CSc., Assoc. prof. Ing. Pavel BUČKA, CSc.
Exam type	Semester study and its advocacy
Description	The goal of the subject is to give students a basic understanding of the need to safeguard national security and its institutionalization.
Teaching Content	- State and its functions - Assessment of the security environment - The current security threats (terrorism, hybrid threats) - State security system - Role of the Armed Forces to safeguard national security
Reading materials	1. Peace operations of international crises management. Ivančík, R., Jurčák, V., Monograph, ISBN 978-83-936652-6-6, 2013. 2. Hybrid Threat Force Structure Organization Guide. ISBN 9781514373095, 2015, Library ZF 34498. 3. Hybrid Warfare and Transnational Threats: Perspectives for an Era of Persistent Conflict. ISBN 100-9723858-5-4, Library ZF 34474. 4. Hybrid Warfare Fighting Complex Opponents from the Ancient World to the Present. Murray, W., Mansoor, P., ISBN 978-1-107-02608-7, Library ZF 34496. 5. Terrorism and Political Violence. Kennedy-Pipe, C., Clubb, G., Mabon, S., ISBN 978-1-4462-7280-0, Library ZF 34290.
Remarks	

Armed Forces Academy
of General Milan Rastislav Stefanik
Demanova 393, 031 06 Liptovsky Mikulas

ERASMUS offer for incoming students

Department	Department of Informatics
Subject/ title	Network and Computer Security Fundamentals
Credits	4 ECTS
Hours	30
Level (Bachelor/master)	Bachelor
Tutor(s)	Ing. Július BARÁTH, PhD., Ing. Miroslav ĎULÍK, PhD., mjr. Ing. Michal TURČANÍK, PhD., Ing. Miloš OČKAY, PhD.
Exam type	On-line and skills-based assessment
Description	The goal of this course is to introduce students to fundamental networking and computer security concepts and technologies. The course will assist students in developing the skills necessary to plan and implement small networks across a range of applications. This course is supported by a wide range of on-line materials, simulation software and assessment tools in the computer-based learning environment.
Teaching Content	Living in a Network-Centric World Communicating over the Network Application Layer Functionality and Protocols OSI Transport Layer OSI Network Layer Addressing the Network – IPv4 Data Link Layer OSI Physical Layer Ethernet Planning and Cabling Networks Configuring and Testing Network Modern Network Security Threats Cryptographic Systems
Reading materials	DYE, M. A.: Network Fundamentals. Cisco Press, Indianapolis, 2008. ISBN: 978-1-58713-208-7 On-line materials
Remarks	

Armed Forces Academy
of General Milan Rastislav Stefanik
Demanova 393, 031 06 Liptovsky Mikulas

ERASMUS offer for incoming students

Department	Department of Electronics
Subject/ title	Sensor systems
Credits	4 ECTS
Hours	30
Level (Bachelor/master)	Master
Tutor(s)	Maj. Ing. Roman BEREŠÍK, PhD.
Exam type	Written exam (test)
Description	The aim of this subject is to provide students with the information regarding to principles of modern sensors and sensor systems used in military and security applications.
Teaching Content	Concept of sensor systems Sensors and sensor system's properties Principles of wireless sensor systems and their applications Algorithms of digital signal processing used in sensor systems Principles of events detection by using sensor systems Wireless sensor networks
Reading materials	S. V. Vaseghi: Advanced Digital Signal Processing and Noise Reduction, 2nd Edition, John&Wiley, 2000, S. M. KUO, B. H. LEE, W. TIAN: Real-Time Digital Signal Processing: Fundamentals, Implementations and Applications, 3rd Edition, John&Wiley, 2013, Ch. BELL: Beginning Sensor networks with Arduino and Raspberry Pi, Apress, 2013, Gerard C.M. MEIJER: Smart Sensor Systems, John&Wiley, 2008,
Remarks	

Armed Forces Academy
of General Milan Rastislav Stefanik
Demanova 393, 031 06 Liptovsky Mikulas

ERASMUS offer for incoming students

Department	Electronics
Subject/ title	Signal processing
Credits	4 ECTS
Hours	30
Level (Bachelor/master)	Bachelor
Tutor(s)	Doc. RNDr. František Nebus, PhD.
Exam type	Written exam (test)
Description	The aim of this subject is to provide students with the common understanding of the basic theories, principles and practice of analog and digital signal processing and some practical examples of measurement and evaluation.
Teaching Content	Signal nature, interpretation and signal systems. Deterministic and stochastic signal analysis methods. Systems characteristics and signals filtration. Signal analysis examples and measurement.
Reading materials	1. Signal Processing for Communications, by P.Prandoni and M. Vetterli, © 2008, EPFL Press 2. https://www.mathworks.com/help/signal/ 3. The Scientist and Engineer's Guide to Digital Signal rocessing Second Edition by Steven W. Smith ISBN 0-9660176-6-8
Remarks	

Armed Forces Academy
of General Milan Rastislav Stefanik
Demanova 393, 031 06 Liptovsky Mikulas

ERASMUS offer for incoming students

Department	Mechanical Engineering
Subject/ title	Technologies
Credits	4 ECTS
Hours	30
Level (Bachelor/master)	Bachelor/master
Tutor(s)	Assoc. prof. Dipl. Eng. Mariana KUFFOVA, Ph.D.
Exam type	Written exam (test) + presentation
Description	The aim of this subject is to provide students with the common understanding of the particular technologies within mechanical engineering, theories and practices as well as technical tours to the factories.
Teaching Content	Casting Forming Welding Machining Progressive technologies
Reading materials	
Remarks	