

Countries	Institutions	Common Module	ECTS
Romania Poland Greece France Bulgaria	Military Technical Academy "Ferdinand I" Military University of Technology Hellenic Air Force Academy French Air Force Academy "Vasil Levski" National Military University	Integrated Weapon Systems <i>European Common Technical Semester for Defence and Security</i>	3.0

Service	Minimum Qualification of Instructors
Technical/ALL	Officers or civilian Lecturers: - English: Common European Framework of Reference for Languages (CEFR) Level B2 or min. NATO STANAG 6001 Level 3. - Expertise in relevant topics. - Relevant academic publications.
Language English	

Prerequisites for international participants	Goal of the Module
- English: Common European Framework of Reference for Languages (CEFR) Level B1 or NATO STANAG Level 2. - At least 1 year of national (military) higher education. - Basic knowledge in technical systems for security and defence	- Increasing knowledge and understanding in integrated weapon systems - Management, integration, exploitation and analysis of integrated weapon systems. - Deepen knowledge of the practical application using weaponeering methods.

Learning outcomes	Know- ledge	- Knows the basic concepts related to the mission configurations related to the technical systems. - Knowledge about the Armament and Ammunition System Characteristics and Damage Mechanisms. - Identify the aircraft armament and missile technology & army armament and ordnance in relation to the established mission.
	Skills	- Is able to use the weaponeering methods to elaborate a mission configuration. - Give examples of real applications and practical problems to underline how the topics treated in the course are used within engineering activity.
	Respon- sibility and autonomy	- Understands the basic concept of the fluid mechanics and aerodynamics for defence and security systems; - Target vulnerability assessment, weapon selection and effectiveness evaluation of selected weapon systems for specific targets subjects.

Verification of learning outcomes:
Observation: Throughout the Module students will meet with the Integrated weapon Systems applications, and they will discuss the given topics in the plenary and present teamwork results. During this workshop, students will be evaluated to verify their competencies. Project: Teamwork project and project defence. Test: Final examination at the end of the module.

Module details		
Main Topic	Recom- mended WH	Details
Mission configurations/Military Leadership related to technical systems	6	Management of the modern battlefield by the commander. Transfer of knowledge and skills related to the basic technologies used on the battlefield by developed countries. The goal is to develop military management and leadership skills. Lecture (2h); Applications (4h).
Security and defence technical systems characteristics (satellites, radar systems, electronic, communication and IT systems, aircraft, helicopters, UAVs, etc)	6	Transfer of knowledge in technical systems characterising modern military operations in the field. The substantive scope of education includes satellites, radar systems, electronic communication and IT systems, aircraft, helicopters, UAVs. The aim is to provide knowledge about the practical aspects of the discussed technical systems in the context of the modern battlefield. Lecture (2h); Applications (4h).
Combat vehicles Characteristics	6	Characteristics of combat vehicles. The goal is to provide knowledge about selected types of technical systems, taking into account their specifications and the scale of destruction Lecture (2h); Applications (4h).
Armament and Ammunition System Characteristics and Damage Mechanisms	6	Characteristics of selected armaments and ammunition, taking into account the impact of these armaments and ammunition on selected targets. Description of the destruction process resulting from the use of different types of weapons and ammunition. The goal is to provide knowledge about selected types of ammunition and weapons, taking into account their specifications and the scale of destruction. Lecture (2h); Applications (4h).
Armament and Ammunition Systems. Blast and Ballistics/Explosive Engineering	6	Armament and Ammunition Systems characteristics including the modern battlefield conditions. Description of using selected armament and ammunition systems during military operations in specific climatic conditions. Characteristics of selected blast and ballistics technologies due to the modern battlefield conditions. The goal is to provide knowledge of specification of selected armament ammunition systems. Lecture (2h); Applications (4h).
Target vulnerability assessment, weapon selection and effectiveness evaluation of selected weapon systems for specific targets (Weaponizing)	6	Transfer of knowledge in the field of target vulnerability assessment, weapon selection and effectiveness evaluation of selected weapon systems for specific targets. The substantive scope of the subject of education includes selected weapon systems for specific targets (Weaponizing). The aim is to provide knowledge about these weapons including technical aspects of using these items in specific conditions of modern battlefield. Lecture (2h); Applications (4h).
Aircraft armament&missiles technology & army armament and ordnance	6	Characteristics of selected aircraft armament&missiles technology as well as army armament and ordnance. Description of the methodology of using selected technologies due to modern battlefield conditions. The goal is to provide knowledge of specification of selected aircraft armament&missiles technologies and army armament. Lecture (2h); Applications (4h).
Total WH	42	

Module details		
Main Topic	Recom- mended WH	Details
Additional hours (WH) to increase the learning outcomes		
Self-Studies and syndicate work	33	- Enhancing knowledge by studying specific documents. - Preparation for the group project. - Teamwork for the group project. - Those hours comprise the work of students in exercises to improve skills and consolidate knowledge.
Total WH	75	

List of Abbreviations:

B1, B2 CEFR Levels
 CEFR Common European Framework of Reference for Languages
 ECTS European Credit Transfer and Accumulation System
 WH Working Hour