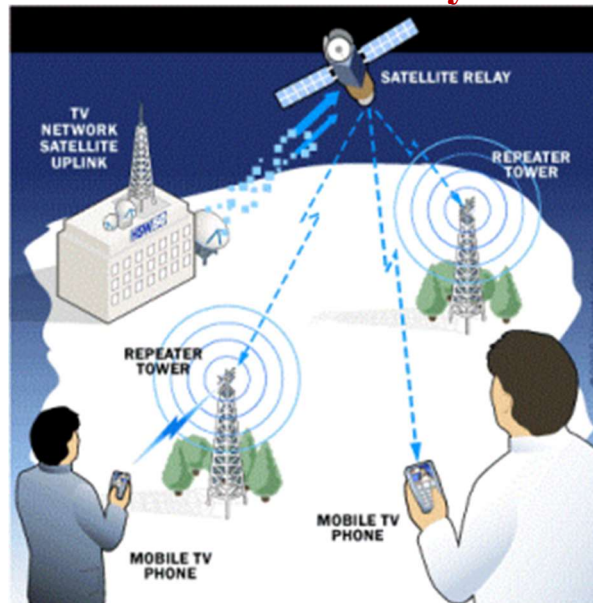


**ROMANIA**  
**MINISTRY OF NATIONAL DEFENCE**  
**MILITARY TECHNICAL ACADEMY**  
**“FERDINAND I”**



**FACULTY E**  
**Faculty of Communications and Electronic Systems for Defence**  
**And Security**



**DEPARTMENT OF COMMUNICATIONS AND INFORMATION  
TECHNOLOGY (E1)**

**DEPARTMENT OF MILITARY ELECTRONIC EQUIPMENT AND  
SYSTEMS (E2)**

## Programme of study - 1st cycle - License Communications for Defense and Security

### 1<sup>st</sup> Year:

**Fundamental Disciplines:** *Mathematical Analysis; Algebra, Analytic and Differential Geometry; Techniques and Computer Programming Languages; Physics; Chemistry; Applied Informatics; Computer Aided Graphics; Probability and Mathematical Statistics; Special Mathematics*

**Disciplines in the Field of Study:** *Mechanics and Theory of Mechanisms; Materials and Theory of Electronic Elements; Basis of Electrotehnics I; Internship I*

**Complementary and Military Disciplines:** *Communication, Public Relations and Negotiation Techniques; English; French; Politology; Psychology and Sociology; Topography; History; Sport*

### 2<sup>nd</sup> Year:

**Fundamental Disciplines:** *Special Mathematics; Physic of Lasers; Optics and Optoelectronics; General Management*

**Disciplines in the Field of Study:** *Basis of Electrotehnics II; Devices and Electronic Circuits; Signals and Analogical Systems; Measurements in Electronics and Telecommunications; Digital Integrated Circuits; Analogical Integrated Circuits; Numerical Signal Treatments; Architecture of Microcomputers and Microcontrollers; Techniques of Microwaves; Television; Systems of Image Interception and Display; Power Electronics; Fundamental Electronic circuits; Electronic circuits; Internship II*

**Complementary and Military Disciplines:** *English; French; Sport*

### 3<sup>rd</sup> Year:

**Fundamental Disciplines:** *Basic Logistics*

**Disciplines in the Field of Study:** *Special Computer Systems; Digital Processors for Signals; Propagation of Radio Waves, Antennas for Communications and Military Electronic Systems; Data Transmissions; Computer Networks and Data Transmissions Protocols; Microwaves and Antennas Circuits; Management of Military Technical and Economic Activities; Treatment of Voice Signals; Automatics and Automatic Systems; Reliability and Testing of Electronic and Telecommunication Systems*

**Specialty Disciplines:** *Information Theory and Codes; Technique of Radio-communications; Networks and Communication Protocols; Security of Communications and Information; Telephonic Commutation and Multiplexation Systems I; Transmission and Data Networks; Internship III*

**Complementary and Military Disciplines:** *Economy and Accountancy; English; French; Sport*

### 4<sup>th</sup> Year:

**Disciplines in the Field of Study:** *Electromagnetic Compatibility; Logistic of Electronic and Telecommunication Systems; Military Tactics*

**Specialty Disciplines:** *Telephonic Commutation and Multiplexation Systems II; Special Communication Equipments; Military National Communication Network; Electronic Warfare; Satellite and Radio-Relay Communication Systems; Radio-Communication Equipments; Communication Integrated Systems and Information Technology; Ultra-Wide Communication Band Systems and Techniques; Mobile Radio-Communications; Optical Communication Systems; Internship IV*

**Complementary and Military Disciplines:** *Geography; Management of Projects; Sport*



## Programme of study - 1st cycle - License Military Electronic Equipments and Systems

### 1<sup>st</sup> Year:

**Fundamental Disciplines:** *Mathematical Analysis; Algebra, Analytic and Differential Geometry; Techniques and Computer Programming Languages; Physics; Chemistry; Applied Informatics; Computer Aided Graphics; Probability and Mathematical Statistics; Special Mathematics*

**Disciplines in the Field of Study:** *Mechanics and Theory of Mechanisms; Materials and Theory of Electronic Elements; Basis of Electrotehnics I; Internship I*

**Complementary and Military Disciplines:** *Communication, Public Relations and Negotiation Techniques; English; French; Politology; Psychology and Sociology; Topography; History; Sport*

### 2<sup>nd</sup> Year:

**Fundamental Disciplines:** *Special Mathematics; Physic of Lasers; Optics and Optoelectronics; General Management*

**Disciplines in the Field of Study:** *Basis of Electrotehnics II; Devices and Electronic Circuits; Signals and Analogical Systems; Measurements in Electronics and Telecommunications; Digital Integrated Circuits; Analogical Integrated Circuits; Numerical Signal Treatments; Architecture of Microcomputers and Microcontrollers; Techniques of Microwaves; Television; Systems of Image Interception and Display; Power Electronics; Fundamental Electronic circuits; Electronic circuits; Internship II*

**Complementary and Military Disciplines:** *English; French; Sport*

### 3<sup>rd</sup> Year:

**Fundamental Disciplines:** *Basic Logistics*

**Disciplines in the Field of Study:** *Special Computer Systems; Digital Processors for Signals; Propagation of Radio Waves, Antennas for Communications and Military Electronic Systems; Data Transmissions; Computer Networks and Data Transmissions Protocols; Microwaves and Antennas Circuits; Management of Military Technical and Economic Activities; Treatment of Voice Signals; Automatics and Automatic Systems; Reliability and Testing of Electronic and Telecommunication Systems*

**Specialty Disciplines:** *Elements of Artificial Intelligence in Surveillance Systems; Optimal Treatments of Radar Signals; Structures for Microwaves Emitters and Receptors; Principles and Methods for Guidance, Navigation and Controls; Modern Principles and Methods Used in Tracking and Surveillance Electronic Systems; Image Treatments in Surveillance and Recognition Electronic Systems; Recognition Radio and Video Modules; Internship III*

**Complementary and Military Disciplines:** *Economy and Accountancy; English; French; Sport*

### 4<sup>th</sup> Year:

**Disciplines in the Field of Study:** *Electromagnetic Compatibility; Logistic of Electronic and Telecommunication Systems; Military Tactics*

**Specialty Disciplines:** *Statistic Treatment of Signals; Optimal Filtration and Decision in Radar Systems; Electronic Systems for Aerial and Perimeter Surveillance; Techniques and Methods for Information Fusion; Electronic Warfare; Global Positional Systems and Satellite Communication; Electronic Simulators; Electronic Systems for Security and Defense; Electronic Systems for Weapons Command and Controls; Sensors and Sensorial Systems; Automatic Recognition and Identifying Systems; C4I Systems; Engineering Systems Elements; Military Communication Networks and Systems; Internship IV*

**Complementary and Military Disciplines:** *International Humanitarian Law; NBC Protection; Geography; Management of Projects; Sport*

