

RAVEN Academy Training Catalog

Professional training programmes for AI, Autonomous Systems, UAV Technologies and Defence Applications. RAVEN Academy delivers hands-on, industry-aligned courses designed for military operators, engineers, and technical leads operating in high-stakes environments.

10+ Professional Programmes

Specialised courses across UAV, AI, and defence technology domains

TR / EN

Bilingual delivery in Turkish and English across all programmes

Hands-On

Practical exercises and live operations embedded in every course

Industry Certification

Official RAVEN Academy Certificate issued upon successful course completion

Expert Instructors

Courses delivered by experienced engineers and academicians.

Real Defence Use Cases

Based on operational UAV, AI and autonomous defence and civilian projects

Well-known Technology Stack

ROS2 • PX4 • OpenCV • NVIDIA Jetson • TensorRT • CUDA • Deep Learning • YOLO

Flexible Training Modes

On-site • Online • Customer Facility • Corporate Bootcamps

Beginner to Expert

Learning paths designed for beginners, engineers and advanced professionals

Custom Corporate Training

Tailor-made programmes for companies, agencies, universities and industry



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TRAINING THE MINDS. BUILDING THE FUTURE.
— A RAVENTECH INITIATIVE —

Tactical FPV Drone Operator Training

A comprehensive 14-day programme that takes operators from foundational FPV theory through to live flight operations and tactical mission execution. Designed for military and security personnel, this course combines simulator training with real-world flight exercises to build confident, operationally ready FPV pilots. Participants gain proficiency in manual flight control, mission planning, and emergency response procedures under realistic operational conditions. The curriculum is structured to accommodate both beginners and intermediate operators, with progressive skill-building modules that culminate in a live flight evaluation and final assessment. Small class sizes of 5-10 participants ensure individual attention and ample flight time for each trainee.

Programme Details

- **Participants:** 5-10
- **Duration:** 14 Days
- **Level:** Beginner / Intermediate
- **Language:** TR / EN
- **Hands-On:** Yes
- **Certificate:** RAVEN Academy Tactical FPV Operator Certificate

Training Modules

- FPV Fundamentals
- Flight Simulator
- Manual Flight
- Mission Planning
- Emergency Procedures
- Live Flight
- Final Evaluation



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Computer Vision for Autonomous Systems

A focused 5-day programme equipping engineers and analysts with the skills to develop and deploy vision-based perception systems for autonomous platforms. Participants work with industry-standard tools including OpenCV to implement real-time image processing, feature matching, and object detection algorithms. The curriculum progresses from fundamental image processing techniques through to advanced vision navigation methods, enabling participants to build systems capable of operating in dynamic and contested environments. This intermediate-level course is designed for technical professionals with a background in software engineering or systems development, and includes hands-on exercises that reinforce each module with practical implementation tasks.

Programme Details

- **Participants:** 5-20
- **Duration:** 5 Days
- **Level:** Intermediate
- **Language:** TR / EN
- **Hands-On:** Yes
- **Certificate:** RAVEN Academy
Computer Vision Certificate

Training Modules

- Image Processing
- OpenCV
- Feature Matching
- Optical Flow
- Object Detection
- Vision Navigation



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Artificial Intelligence for Defence Applications

A 4-day intensive programme covering the full AI pipeline from model development to edge deployment in defence contexts. Participants explore deep learning architectures, real-time detection frameworks such as YOLO, and segmentation and classification techniques tailored for operational environments. The course addresses the unique challenges of deploying AI in resource-constrained, high-reliability settings, including model optimisation, latency management, and robustness against adversarial conditions. Designed for intermediate to advanced practitioners, this programme includes hands-on sessions where participants train, evaluate, and deploy models on edge hardware, preparing them to integrate AI capabilities into existing defence systems and platforms.

Programme Details

- **Participants:** 10-20
- **Duration:** 4 Days
- **Level:** Intermediate / Advanced
- **Language:** TR / EN
- **Hands-On:** Yes
- **Certificate:** RAVEN Academy AI Certificate

Training Modules

- Deep Learning
- YOLO
- Segmentation
- Classification
- Edge AI
- Deployment



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UAV Navigation & GPS-Denied Systems

An advanced 5-day programme focused on autonomous navigation in GPS-denied and contested environments. Participants master visual odometry, SLAM algorithms, sensor fusion techniques, and terrain-based navigation methods essential for operating UAVs in denied or degraded operational spaces. The curriculum covers the full spectrum of navigation challenges, from visual feature extraction and map building to multi-sensor integration and satellite matching for position verification. Designed for advanced practitioners, this course prepares engineers and operators to design and deploy UAV systems capable of maintaining situational awareness and mission effectiveness when traditional navigation aids are unavailable or compromised.

Programme Details

- **Participants:** 10-20
- **Duration:** 5 Days
- **Level:** Advanced
- **Language:** TR / EN
- **Hands-On:** Yes
- **Certificate:** RAVEN Academy
Navigation Certificate

Training Modules

- Visual Navigation
- Visual Odometry
- SLAM
- Sensor Fusion
- Terrain Navigation
- Satellite Matching



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Electro-Optical Systems Engineering

A 5-day programme covering the design, integration, and operation of electro-optical and infrared systems on UAV and ground platforms. Participants gain hands-on experience with EO/IR cameras, thermal imaging payloads, gimbal systems, and video interface standards used in modern defence applications. The curriculum addresses the full lifecycle of EO system deployment, from optical design principles and sensor selection through to calibration procedures and real-time video transmission. Hands-on practice is optional, allowing the course to be tailored for engineering teams focused on system design or operational crews focused on payload utilisation and maintenance.

Programme Details

- **Participants:** 10-20
- **Duration:** 5 Days
- **Level:** Intermediate
- **Language:** TR / EN
- **Hands-On:** Optional
- **Certificate:** RAVEN Academy EO Systems Certificate

Training Modules

- EO/IR Cameras
- Thermal Imaging
- Optics
- Gimbals
- Calibration
- Video Interfaces



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Autonomous Robotics & ROS2

A 5-day programme providing engineers with the skills to develop, integrate, and deploy autonomous robotic systems using ROS2, PX4, and MAVLink. The course covers sensor integration, autonomy stack development, and mission control architecture for both aerial and ground platforms. Participants work through the complete development pipeline, from configuring ROS2 nodes and establishing communication interfaces to implementing autonomous behaviours and managing mission-level decision logic. Designed for intermediate to advanced practitioners, this programme is ideal for teams building custom robotic platforms or integrating autonomy into existing UAV and UGV systems for defence and security applications.

Programme Details

- **Participants:** 10-15
- **Duration:** 5 Days
- **Level:** Intermediate / Advanced
- **Language:** TR / EN
- **Hands-On:** Yes
- **Certificate:** RAVEN Academy Robotics Certificate

Training Modules

- ROS2
- PX4
- MAVLink
- Sensors
- Autonomy
- Mission Control



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Counter-UAS Technologies

A 5-day programme addressing the full spectrum of counter-unmanned aircraft system capabilities, from threat analysis and detection through to electronic warfare and interceptor operations. Designed for defence and security teams, this course covers both the technical and operational dimensions of Counter-UAS deployment. Participants study detection and tracking methodologies, evaluate interceptor system options, and develop operational concepts for layered airspace defence. The curriculum combines classroom instruction with hands-on exercises, enabling teams to understand system limitations, plan effective counter-drone responses, and integrate Counter-UAS capabilities into broader air defence architectures.

Programme Details

- **Participants:** 10-20
- **Duration:** 5 Days
- **Level:** Intermediate
- **Language:** TR / EN
- **Hands-On:** Yes
- **Certificate:** RAVEN Academy
Counter-UAS Certificate

Training Modules

- Threat Analysis
- Detection
- Tracking
- Interceptors
- Electronic Warfare
- Operational Concepts



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UAV System Integration & Payload Engineering

A 4-day programme covering the engineering principles and practical techniques required to integrate payloads, flight controllers, power systems, and communications into complete UAV platforms. Participants gain hands-on experience with system-level testing and validation procedures used in professional UAV development. The curriculum addresses the full integration workflow, from mechanical mounting and electrical wiring through to communication protocol configuration and flight testing. Designed for intermediate-level engineers, this course prepares teams to design, build, and certify UAV systems that meet operational requirements for payload capacity, endurance, and mission reliability in defence and security contexts.

Programme Details

- **Participants:** 5-15
- **Duration:** 4 Days
- **Level:** Intermediate
- **Language:** TR / EN
- **Hands-On:** Yes
- **Certificate:** RAVEN Academy System Integration Certificate

Training Modules

- Flight Controllers
- Power Systems
- Payload Integration
- Communications
- Testing



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