



NATO
MODELLING & SIMULATION
CENTRE OF EXCELLENCE
ROME, ITALY



Modelling & Simulation Courses & Training Activities



www.mscoe.org

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Director Message

Welcome to the NATO Modelling and Simulation Centre of Excellence (NATO M&S COE) Catalogue. As a NATO-accredited Centre of Excellence and Education Training Facility, we contribute to the Alliance capacity building. The NATO M&S COE enhances NATO by providing expertise in all four pillars:

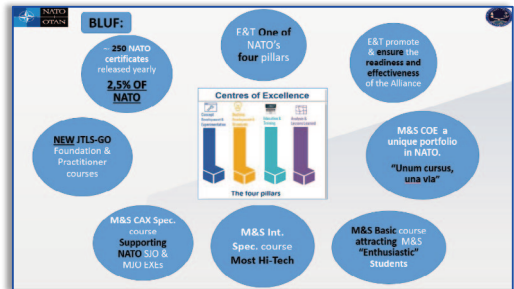
- **Education & Training:** We offer a wide range of courses and training programs on modelling and simulation, from basic to advanced levels. Our courses are designed to help you develop the skills and knowledge you need to effectively use modelling and simulation in your work.
- **Exercise and Evaluation:** We design and conduct exercises and evaluations that use modelling and simulation to test and improve NATO capabilities. Our exercises and evaluations are realistic and challenging, and they help NATO forces to be more prepared for real-world operations.
- **Analysis & Lessons Learned:** We collect and analyse data from NATO exercises and operations. This data helps us to identify best practices and lessons learned, which we share with NATO forces to improve their performance.
- **Doctrine Development and Standardization:** We work with NATO forces to develop and standardize doctrine and procedures for using modelling and simulation. This ensures that NATO forces are using modelling and simulation in a consistent and effective way.
- **Concept Development and Experimentation:** We develop and experiment with new concepts and ideas for using modelling and simulation. Our work helps NATO forces to stay ahead of the curve and to be prepared for the challenges of the future.

The NATO M&S COE is committed to innovation. We believe that modelling and simulation can be a powerful tool for transforming NATO forces. We are constantly looking for new ways to use modelling and simulation to improve NATO capabilities. We invite you to learn more about the NATO M&S COE and the services we offer. You can find more information on our website or by contacting us directly.



Doctrine Education Training Branch Activities

The NATO M&S COE Doctrine Education & Training Branch is a multi-nationally established and sponsored entity that offers recognized expertise and experience in the field of Modelling and Simulation to the benefit of the Alliance. We are committed to providing training and education to NATO M&S Subject Matter Experts (SMEs), organizing M&S courses, symposia, and workshops, supporting the operational training of M&S tools, processes, and systems, providing M&S support to NATO operations and training, and interacting with national M&S agencies, institutions, industry, academia, and organizations.



What does the NATO M&S COE Doctrine Education & Training Branch do? The NATO M&S COE Doctrine Education & Training Branch does the following:

- Coordinates Training and Expert Certification for M&S SMEs: We coordinate the training and expert certification of NATO M&S SMEs to ensure that they have the skills and knowledge they need to effectively use modelling and simulation in their work.
- Organizes M&S courses, symposia, and workshops: We organize a variety of M&S courses, symposia, and workshops to provide NATO personnel with the latest knowledge and skills in modelling and simulation.
- Supports the operational training of M&S tools, processes, and systems: We support the operational training of NATO personnel on the use of M&S tools, processes, and systems to ensure that they are able to use them effectively in real-world operations.
- Provides M&S support to NATO operations and training: We provide M&S support to NATO operations and training to help NATO forces make better decisions and achieve their objectives.
- Interacts with national M&S agencies, institutions, industry, academia, and organizations: We interact with national M&S agencies, institutions, industry, academia, and organizations to share knowledge and best practices in modelling and simulation.

Who is the NATO M&S COE Doctrine Education & Training Branch for?

The NATO M&S COE Doctrine Education & Training Branch is for NATO personnel who are interested in learning more about modelling and simulation. We offer courses and training programs for all levels of experience, from beginners to experts.

How can I learn more about the NATO M&S COE Doctrine Education & Training Branch?

You can learn more about the NATO M&S COE Doctrine Education & Training Branch by visiting our website or contacting us directly. We would be happy to answer any questions you have about our programs and services.

NATO APPROVED & LISTED COURSES

COURSE TITLE: NATO MODELING & SIMULATION BASIC COURSE

AIM: provides to the attendees a basic education in the field of Modelling & Simulation (M&S), through the knowledge of theory, processes, techniques, procedures and technologies oriented to M&S NATO & PfP military purposes. This E&IT solution is a 4-day resident course that introduce Modelling and Simulation in a military context.

The following methods of instructions are employed: * interactive lectures; * demonstrations; * case study.

The course is supported by several external entities, NATO HQs, Academia, and Industry.

Date: generally in March & November

Duration: 1 week

Course structure: Resident, twice a year

Target Audience: personnel coming from NATO Bodies and NATO Nations.

The NATO M&S Basic Course is also open to Partners as follows:

* Euro-Atlantic Partnership Council (EAPC); * NATO's Mediterranean Dialogue (MD); * Istanbul Cooperation Initiative (ICI); * Partners across the globe (Afghanistan, Australia, Iraq, Japan, Pakistan, Republic of Korea, New Zealand, Mongolia); * International organization (UN, EU, OSCE).

- a. **Rank Level :** OR, OF2 thru OF5, Civilians equivalent
- b. **Language Proficiency:** Language skills: English: 3,2,3,2. IAW STANAG 6001
- c. **Pre course knowledges:** to be familiar with tools used to support exercises below the joint operational level in NATO (eg: JCATS). It is also recommended to perform the Introduction to M&S course (ADL 216).

Classification: NATO UNCLASSIFIED

DISCIPLINE: Modelling & Simulation

Area: Basic Knowledge about Modelling & Simulation

DEPTH OF KNOWLEDGE: LEVEL 200

ETOC CODE: ETE- ET-21732

ADMIN NOTE: More detailed information and NATO CCD are available on the NATO Electronic Education and Training Opportunities Catalogue (ETOC) and on the M&S COE web site

COURSE TITLE: NATO M&S INTEGRATION SPECIALIST COURSE

AIM: The course is designed to provide the students with a knowledge package focused on NATO exercises and training doctrine, with a strong focus on federation and integration of C2 and constructive simulation systems. The course will provide the foundations of the skill set required to effectively conduct M&S integration specialist support in NATO exercises, below the **joint** operational level. The final objective is to enhance knowledge of national M&S senior users by creating awareness of the NATO-specific simulation issues as well as of the emerging M&S integration and federation capabilities. The course is supported by NATO Joint Force Training Centre (JFTC), Lawrence Livermore National Laboratory (LLNL).

Date: Generally in May

Duration: 1 week

Course structure: Resident, yearly

Target Audience: Personnel coming from NATO Bodies and NATO Nations, in possess of consolidated experience in constructive simulation systems.

- a. **Rank Level:** Officers (OF), Other Ranks (OR), Civilians.
- b. **Language Proficiency:** Language skills: English: 3,3,3,3. IAW STANAG 6001
- c. **Pre course knowledges:** to be familiar with tools used to support exercises below the joint operational level in NATO (eg: JCATS). It is also recommended to perform the Introduction to M&S course (ADL 216) and/or **NATO Modelling & Simulation Basic Course**

Classification: NATO UNCLASSIFIED

DISCIPLINE: Modelling & Simulation

Area: Federation and Integration of C2 and Constructive Simulation Systems.

DEPTH OF KNOWLEDGE: LEVEL 300

ETOC CODE: ETE-IT 32189

ADMIN NOTE: More detailed information and NATO CCD are available on the NATO Electronic Education and Training Opportunities Catalogue (ETOC) and on the M&S COE web site



COURSE TITLE: NATO CAX Specialist Certification Course

AIM: The course is designed to provide the students with a basic knowledge package about NATO exercises and training. It is focused to develop the operator skills and required for an effective conduct of a Computer Assisted Exercise (CAX). It provide students with the comprehensive skills required during NATO exercise and to certify them as NATO CAX operators able to support NATO exercises at joint operational level and above. The final objective is to enhance knowledge of national M&S senior users by creating awareness of the NATO-specific simulation issues as well as of the emerging M&S capabilities. The course is supported by NATO Joint Warfare Centre (JWC).

Date: Generally June/July

Duration: 1 week

Course structure: Resident, twice a year.

Target Audience: Personnel coming from NATO Bodies and NATO Nations, in possess of consolidated experience in constructive simulation systems.

- a) **Rank Level:** Officers (OF), Other Ranks (OR), Civilians.
- b) **Language Proficiency:** Language skills: English: 3,3,3,3. IAW STANAG 6001
- c) **Pre course knowledges:** to be familiar with tools used to support exercises below the joint operational level in NATO (eg: JTLS-JEMM). It is also recommended to perform the Introduction to M&S course (ADL 216) and/or **NATO Modelling & Simulation Basic Course**

Classification: NATO UNCLASSIFIED

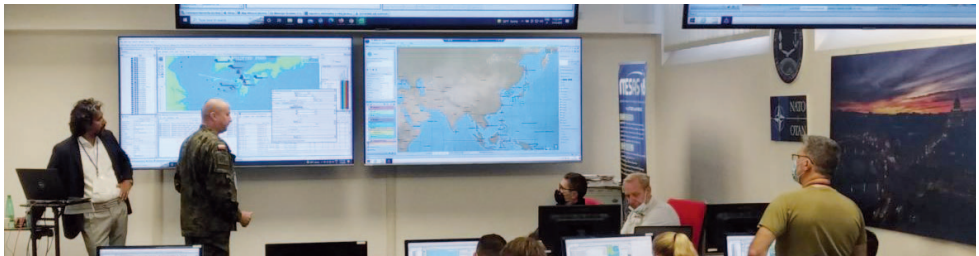
DISCIPLINE: Modelling & Simulation

Area: CAX and Simulation Systems.

DEPTH OF KNOWLEDGE: LEVEL 300

ETOC CODE: ETE-IT-31405

ADMIN NOTE: More detailed information and NATO CCD are available on the NATO Electronic Education and Training Opportunities Catalogue (ETOC) and on the M&S COE web site.



COURSE TITLE: NATO M&S Introductory Course ADL 211

AIM: The course is sponsored, designed and developed by NATO Modelling & Simulation Center of Excellence (NATO M&S CoE) with the support of NATO ACT ETEE for its distribution on the JADL NATO LMS. It covers the origin of military M&S, basic terminology used and classification of M&S applications according to the NATO Modelling and Simulation Master Plan. This course is provided in e-learning format.

Date: 24/7

Duration: subjective N/A

Course structure: On line

Target Audience:

- a. **Rank Level:** for Officers (OF), Other Ranks (OR), Civilians of all fields.
- b. **Language Proficiency:** Language skills: English: 2,2,2,2. IAW STANAG 6001
- c. **Pre course knowledges:**

Classification: NATO UNCLASSIFIED

DISCIPLINE: Modelling & Simulation

Area: General Knowledge about Modelling & Simulation

DEPTH OF KNOWLEDGE: LEVEL 200

ETOC CODE: ETE-ET-12117

ADMIN NOTE: More detailed information and NATO CCD are available on the NATO Electronic Education and Training Opportunities Catalogue (ETOC) and on the M&S COE web site.



M&S COE COURSES

COURSE TITLE: M&S JTLS – GO Foundation Course (M&S COE)

AIM: The course is designed to serve as a groundwork for the NATO Approved CAX Specialist course. The training will be focused on JTLS-GO simulator system the course agenda is fluid and can change in accordance with specific training requirements that match the NATO annual requirements and the Target Audience needs. It provide the students with a knowledge package about the JTLS-GO functionalities useful to better understand the activities that will be conducted on the follow CAX Specialist course. It is focused to develop JTLS-GO operator skills, the student's activity will be certified by the M&S COE.

Date: Generally in June or July previous the NATO CAX Specialist

Duration: one week

Course structure: residential

Target Audience: Personnel coming from NATO Bodies and NATO Nations, in possess of consolidated experience in constructive simulation systems.

a) Rank Level: Officers (OF), Other Ranks (OR), Civilians.

b) Language Proficiency: Language skills: English: 3,3,3,3. IAW STANAG 6001

c) Pre course knowledges: to be familiar with tools used to support exercises below the joint operational level in NATO (eg: JTLS-JEMM). It is also recommended to perform the Introduction to M&S course (ADL 216), and/or **NATO Modelling & Simulation Basic Course**

Classification: NATO UNCLASSIFIED

DISCIPLINE: Modelling & Simulation

Area: JTLS-GO Simulator

DEPTH OF KNOWLEDGE: LEVEL 300

ETOC CODE: N/A

ADMIN NOTE: More detailed information are available on the M&S COE web site

COURSE TITLE: NATO M&S JTLS – GO Practitioner Course (Rollands)

AIM: The course is designed as an expert-level Training course to the NATO Approved CAX Specialist course. The training will be focused on JTLS-GO simulator system the course agenda is based on the Rollands Course catalogue and it change in accordance with specific training requirements that match the NATO annual requirements and the eventual specific Target Audience needs. The course recognize the relevance of JTLS-GO knowledge within the alliance, and the importance of sharing and expanding expertise in JTLS-GO across NATO and its member nations. The course is conducted in collaboration with ROLANDS & ASSOCIATES LLC. Prospective participants must be certified as CAX Specialist operators. Upon completion of the course, participants will receive a dedicated certification from Rollands.

Date: Generally in October

Duration: one week

Course structure: residential

Target Audience: Personnel coming from NATO Bodies and NATO Nations, in possess of consolidated experience in constructive simulation systems.

- a) **Rank Level:** Officers (OF), Other Ranks (OR), Civilians.
- b) **Language Proficiency:** Language skills: English: 3,3,3,3. IAW STANAG 6001
- c) **Pre course knowledges:** to be familiar with tools used to support exercises at the joint operational level in NATO (eg: JTLS-JEMM). It is also recommended to perform the **NATO Modelling & Simulation Basic Course and the JTLS – GO Foundation Course**

Classification: NATO UNCLASSIFIED

DISCIPLINE: Modelling & Simulation

Area: JTLS-GO Simulator

DEPTH OF KNOWLEDGE: LEVEL 300

ADMIN NOTE: **ADMIN NOTE:** More detailed information are available on the M&S COE web site.



ACRONYMS LIST

ADL: ADVANCED DISTRIBUTED LEARNING (ON LINE)
AAR: AFTER ACTION REVIEW
CAX: COMPUTER ASSISTED EXERCISE
CESIVA: CENTRO DI SIMULAZIONE E VALIDAZIONE ESERCITO
COA: COURSE OF ACTIONS
CT: COLLECTIVE TRAINING
DET: DOCTRINE EDUCATION & TRAINING
E&T: EDUCATION AND TRAINING
EO: EXERCISE OBJECTIVE
ETOC: NATO E&T OPPORTUNITIES CATALOGUE
GEO: GEOGRAPHY
HQ: HEAD QUARTER
JCATS: JOINT CONFLICT AND TACTICAL SIMULATION
IT: INDIVIDUAL TRAINING
JEMM: JOINT EXERCISE MANAGEMENT MODULE
JFTC: JOINT FORCE TRAINING CENTER
JTLS-GO: JOINT THEATRE LEVEL SIMULATION GLOBAL OPERATIONS
JWC: JOINT WARFARE CENTER
LLNL: LAWRENCE LIVERMORE NATIONAL LABORATORY
MEL/MIL: MAIN EVENT LIST MAIN INCIDENT LIST
MJO: MAJOR JOINT OPERATION
NCIA: NATO COMMUNICATION AND INFORMATION AGENCY
NETF: NATO EDUCATION TRAINING FACILITIES
OOB: ORDER OF BATTLE
SCEN: SCENARIO
SIM: SIMULATOR
SJO: SMALL JOINT OPERATION
TO: TRAINING OBJECTIVE
VBS: VIRTUAL BATTLE SPACE



Never Stop Exploring

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