

2009

# Course Syllabus – Transportation



Evolutionary Security Management

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## General Introduction

Evolutionary Security Management commits itself to building the capacity within its partner, client and stakeholder communities. This commitment is part of the core values of the organization that includes three major pillars:

- (1) Quality Assurance,
- (2) Continuous Learning, and
- (3) Commitment to Ongoing Support.

This document provides personnel with a general syllabus with respect to our Tier 1 courses, or core courses. Tier 1 courses can be described as those courses where the content of the course are linked to a community of participants, not the individual clients. For example, the Marine Security Officer course must meet the requirements under the Transport Canada regime for it to have the desired value as expressed by our clients. At the same time, this focus does not absolve us of the responsibility to ensure that such courses take into account our client's specific operational needs.

Each Tier 1 course is subject to the oversight requirements as defined in the *Evolutionary Security Management Training Policy (2009)*. This includes the following:

- *First*, the course is developed through the contributions of the *Scheme Committee* that have all demonstrated significant expertise in the field. This is done to ensure that the course provides a strong basis in what are considered sound and acceptable practices within the industry.
- *Second*, it must be reviewed by the *Certification Committee*, or a group of persons that have strategic knowledge associated with the direction of the security and other applicable industries.
- *Finally*, once it has passed those hurdles, it can then be submitted to the appropriate oversight bodies for inclusion in any programs associated with regulatory oversight.

The *Scheme Committee* and *Certification Committee* both meet at least annually to review the content and context of the work and set the instructor requirements.

The *Scheme Committee* also serves as the evaluation board for our advanced courses. Less rigorous courses may be well served through the use of multiple choice examinations and fill in the blank responses. Our advanced courses, however, focus on more complex issues and, as a result, we require additional confirmation that the individual understands and can apply the material before we are willing to indicate such. Where these courses are involved, the *Certification Committee* acts as the final review and appeal board.

Within this document, you will find three levels of document provided to those that have completed various levels of training. These are the following:

- *Certificate of Attendance* – the individual was present during the presentation (80% and all mandatory elements required) but was not evaluated;
- *Certificate of Successful Completion* – the individual met all attendance requirements and was evaluated against the set criteria for the course; and
- *Certification* – the individual met all attendance requirements, was evaluated against set course requirements, and demonstrated an ability to understand and apply the concepts in the eyes of the scheme committee. Certification is based upon the decision of the *certification committee* upon the *recommendation of the scheme committee* and also involves the signing of an agreement to abide by certain Values and Ethics.

Keep in mind these three distinctions as you are considering the level of training that your organization requires as we are very firm regarding ensuring that only the correct level of document is provided.

Within this document, you will find the following for each of the core courses:

- Name and abbreviation of the course;
- The length of the course;
- The core focus of the course; and
- The nature of confirmation that candidates have passed the course criteria and can be granted the appropriate document.

We hope that you will find this document useful. Should you wish to participate in our training programs, you can contact us at [info@evolutionarysecurity.ca](mailto:info@evolutionarysecurity.ca) or, where training is being considered as part of the solution, at [amcdougall@evolutionarysecurity.ca](mailto:amcdougall@evolutionarysecurity.ca).

## Courses Considered for the 2009-2010 Season

### Interface and Risk Management Based Courses

#### Operational Risk Management in Multi-Modal Environments (ORM MME 001)

*Length: 3 days or approximately 24 hours*

This course is updated *Interface Workshop* offered in 2008 and that takes into account some of the latest emerging concepts in Transportation Systems Security. The focus of the workshop is on managing risk during Operations, and includes units pertaining to *Risk Methodologies, Annualized Loss Expectancy, Proximal and Transactional Risk, Real versus Perceived Risk, Risk Management Alternatives, Demonstrating Accountability (discussion), Identifying and Factoring Vulnerabilities and Safeguards, Cascading Impacts within Systems, Understanding Interdependencies, and Transportation System Fragility*. Following completion of the course and a brief exercise, candidates will be issued a *Certificate of Attendance*. For those wishing to advance this to a *Certificate of Successful Completion*, candidates may submit a whitepaper to the Scheme Committee of the course for board review.

Note that a 3-day exercise seminar takes these concepts and puts them into an operational domain. This three day exercise is a requirement for full *Certification* as it covers the practical application of the overall course material.

*Target audience: Asset Protection Officers (Security, Business Continuity, Emergency Preparedness), Operations Managers, Risk Managers, those with decision-making responsibilities.*

#### Operational Risk Management of Regional Systems (ORM MME 002)

*Length: 3 days or approximately 24 hours*

This course builds upon the [ORM MME 001](#) above but elevates the consideration to regional levels. The focus of the workshop is on being able to *identify, prepare for, mitigate and respond to events* at a regional level and includes units associated with *Building Regional Organizations, Setting Criteria, Monitoring of Compliance, Identifying Fragility in the System, Cascading Impact, Interdependencies, 3R Approach to Network Assurance, Contingency Planning and Control*. Following completion of the theoretical element, candidates undergo a full day exercise that serves as the initial evaluation of performance. Candidates that are successful in applying the principles within a team environment during the exercise are granted a *Certificate of Successful Completion* that can be upgraded to a *Certificate* by submitting a white paper to the Scheme Committee for the course for board review.

*Target audience: Regional Managers, Regional Directors, Operations Planners, Asset Protection Officers (Security, Business Continuity, Emergency Preparedness), Risk Managers, Economic and Infrastructure Planners, and others with decision-making responsibilities wishing to expand their understanding of the topic.*

## TSAO Certification – System-based Courses

### Tier 1 – Awareness of Transportation Systems (TSS Level 1)

*Length 1 day or 8 hours*

This course is a requirement for Tier One certification under the Transportation System Assurance Officer Certification regime. The one-day workshop introduces participants to the organization and oversight of the Transportation System, focussing on a multi-modal approach through topics including *Applicable Security Fundamentals, Identifying Capacity and Impact within Systems, How Impact Cascades within Systems, Regional and Strategic Level Safeguarding, Fragility, and Establishing a Trusted Network*. The course is intended as an awareness session that prepares individuals for more advanced courses, such as [ORM MME 001](#), [ORM MME 002](#), and [TSS Level 2](#). At the end of the one day session, participants walk through a localized scenario describing how the concepts manifest themselves in their local environment and a *Certificate of Attendance* is issued.

*Target audience: Mid-Level Advisors, Regional Managers, Regional Directors, Operations Planners, Asset Protection Officers (Security, Business Continuity, Emergency Preparedness), Risk Managers, Economic and Infrastructure Planners, and others with decision-making responsibilities wishing to expand their understanding of the topic. This course is also intended to assist in the formation of individuals seeking the aforementioned positions.*

### Tier 2 – General Transportation System Security Officer (TSS Level 2)

*Length: 3 days or 24 hours.*

This course is a requirement for Tier Two certification under the Transportation System Assurance Officer certification. The workshop builds upon the concepts presented in [TSS Level 1](#) and develops a more comprehensive multi-modal approach with modules including *System Mission Analysis, Process Flow Analysis, Interdependencies, Threats, Impacts, Capacity, Cascading Impact, Risk, Fragility, Vulnerability, and Safeguarding (local and regional)*. The course also includes a case study, open source intelligence exercise, working lunches and discussions on resumption planning. The course is intended to provide middle to upper-middle managers with the understanding they need to approach Transportation System issues from a system-level and also prepare them for the advanced Tier 3 Transportation System Assurance Officer course ([TSS Level 3](#)). Candidates are issued a *Certificate of Successful Completion* following participation in an exercise and successful completion of a 1.5 hour written examination.

*Target audience: Senior Corporate Advisors, Regional Managers, Regional Directors, Operations Planners, Asset Protection Officers (Security, Business Continuity, Emergency Preparedness), Risk Managers, Economic and Infrastructure Planners, and others with decision-making responsibilities wishing to expand their understanding of the topic. This course is also intended to assist in the formation of individuals seeking strategic leadership roles in organizations providing services provided by the above.*

## Tier 3 – General Transportation System Assurance Officer (TSS Level 3)

*Length: 5 days or 40 hours*

This course is the capstone course for the Transportation System Assurance Officer certification. The five-day workshop builds upon the concepts presented in [TSS Level 2](#) and develops a detailed and comprehensive multi-modal approach with modules including *Oversight of Modal Structures, Systems Approaches, Refining Mission Analysis, Identifying Values and Threats, Assessing Likelihood, Impact, Consequence, Interdependencies, System-level Impact Analysis, Interface-based Risk, Operational Risk, Demand and Capacity, Fragility, and Route Planning*. The course also includes core discussions, syndicate presentations, and working lunches. The course is intended to provide upper-middle and strategic-layer managers with the understanding they need to approach Transportation System issues from a system-level and also prepare them for the challenges associated with managing those organizations. Candidates are issued a *Certificate of Successful Completion* following completion of a three-hour written examination.

*Target audience: Senior Corporate Advisors, Regional Managers, Regional Directors, Operations Planners, Asset Protection Officers (Security, Business Continuity, Emergency Preparedness), Risk Managers, Economic and Infrastructure Planners, and others with decision-making responsibilities wishing to expand their understanding of the topic. This course is also intended to assist in the formation of individuals seeking positions managing the above positions at a national or trans-national level.*

## Mode Based Courses

Mode based courses are intended to go into significant details pertaining to one mode, presenting information within a context that can be linked seamlessly through the [ORM MME 001](#) and [ORM MME 002](#) level courses seamlessly and with minimal translations. All courses are put forward with the intent of meeting any applicable regulatory requirements associated with government-pattern certification (such as under the SCTW for the Marine Security Officer course) and with a focus on using information drawn from professionally accepted Asset Protection and Security practices.

### Marine Security Officer – ISPS (TSS MAR 001)

*Length: 5 days or 37.5 hours*

This course is intended for those seeking Transport Canada recognized training associated with the Company Security Officer (CSO), Port Security Officer (PSO) and Vessel Security Officer (VSO) as required by the Marine Transportation Security Regulations and in response to the International Ship and Port Facility Security (ISPS) Code. The course also expands into applicable Transportation Security principles outlined in the Customs and Trade Partnership against Terrorism (CTPAT) and a range of ISO standards (ISO 16917, 20858, 27000, 28000) given current trends within the industry. The course follows the requirements defined by Transport Canada and the IMO Model Courses (IMO 3.19-3.21 inclusive), involves the completion of a case study (required) and the successful completion of a 3-hour examination, resulting in the issuance of a *Certificate* recognized by Transport Canada (*see note below*).

*This course is intended for those that are seeking certification-level training as applicable under the Transport Canada regime and is considered appropriate for Tier 1 certification under the Transportation System Assurance Officer Certification offered by Evolutionary Security Management. Those seeking certification as a VSO must be aware of the Transport Canada restrictions resulting from the adoption of the SCTW requirements and must be able to present photo identification (two pieces) to verify age, citizenship and seafarer status.*

### Marine Security Officer – Higher Risk (TSS MAR 002)

*Length: 3 days (1 day instruction and 2 days exercise)*

This course is intended for those seeking advanced training that builds past the ISPS and other regulatory requirements. The course focuses on actively protecting the Port, Marine Facility and Ship during routine operations, taking particular note of *Preparing for the Arrival of First Responders, Protecting the Ship in Port, Protecting the Ship Underway, Port Facility Protection, and Profiling Ships and Ports (Threat)*. The one-day series of presentations can, with the right arrangements, be supplemented by actively exercising the principles over two days to give candidates an understanding of

the challenges associated with coordinating the preparation, mitigation, detection, and response to higher-risk events.

*This course is intended for those in management or coordination positions that are seeking additional capabilities to defend their assets under a range of conditions (including hostile) within the marine environment.*

## **Rail Security Officer – ISPS (TSS RSO 001)**

*Length: 5 days or 37.5 hours*

This course is intended for those seeking training associated with protecting rail infrastructure within the confines of the Railway Safety Act, various arrangements with the Canadian and USA governments, and a range of other requirements. The course also expands into applicable Transportation Security principles outlined in the Customs and Trade Partnership against Terrorism (CTPAT) and a range of ISO standards (ISO 27000, 28000) given current trends within the industry. To foster a common-look-and-feel, the course follows the same structure as the Marine Security Officer course, including elements of *Policy, Monitoring, Recognition of Threats, Risk Assessment, Security Plan Development, Drills and Exercises* amongst other factors.

Candidates will be required to complete a case study and successfully complete a 3 hour examination before being issued a *Certificate*.

*This course is intended for those seeking certification-level training within the Rail industry, including Asset Protection Officers (Security, Business Continuity, and Emergency Preparedness), Risk Managers, Operations Managers and others seeking to advance in those roles. The course is also considered a Tier 1 course for our Transportation System Assurance Officer training.*

## **Surface Security Officer – ISPS (TSS STO 001)**

*Length: 5 days or 37.5 hours*

This course is intended for those seeking training associated with protecting surface / trucking infrastructure. The course includes applicable Transportation Security principles outlined in the Customs and Trade Partnership against Terrorism (CTPAT) and a range of ISO standards (ISO 27000, 28000) given current trends within the industry. To foster a common-look-and-feel, the course follows the same structure as the Marine Security Officer and Rail courses, including elements of *Policy, Monitoring, Recognition of Threats, Risk Assessment, Security Plan Development, Drills and Exercises* amongst other factors.

Candidates will be required to complete a case study and successfully complete a 3 hour examination before being issued a *Certificate*.

*This course is intended for those seeking certification-level training within the Surface industry, including Asset Protection Officers (Security, Business Continuity, Emergency Preparedness), Risk Managers, Operations Managers and others seeking to advance in those roles. The course is also considered a Tier 1 course for our Transportation System Assurance Officer training.*

## **Mass Transit Security Officer – ISPS (TSS MTO 001)**

*Length: 3 days or 24 hours*

This course is intended for those seeking training associated with protecting mass transit infrastructure, including public transit systems and light rail. The course includes applicable Transportation Security principles outlined under various government initiatives and takes into account best practices and lessons learned from a range of past incidents. Course topics include *policies, threat environment, risk assessment, plan development, monitoring and compliance activities, drills and exercises, administration and record-keeping.*

Candidates will be required to complete a case study and successfully complete a 3 hour examination before being issued a *Certificate*.

*This course is intended for those seeking certification-level training within the mass transit industry, including Asset Protection Officers (Security, Business Continuity, and Emergency Preparedness), Risk Managers, Operations Managers and others seeking to advance in those roles. The course is also considered a Tier 1 course for our Transportation System Assurance Officer training.*

## **Pipeline Security Officer – ISPS (TSS PSO 001)**

*Length: 5 days or 37.5 hours*

This course is intended for those seeking training associated with protecting pipeline infrastructure, including water, chemical and petrochemical. The course includes applicable Transportation Security principles outlined under various government initiatives and takes into account best practices and lessons learned from a range of past incidents. Course topics include *policies, threat environment, risk assessment, plan development, monitoring and compliance activities, drills and exercises, administration and record-keeping.*

Candidates will be required to complete a case study and successfully complete a 3 hour examination before being issued a *Certificate*.

*This course is intended for those seeking certification-level training within the pipeline industry, including Asset Protection Officers (Security, Business Continuity, Emergency Preparedness), Risk Managers, Operations Managers and others seeking to advance in those roles. The course is also considered a Tier 1 course for our Transportation System Assurance Officer training.*

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## Structure of the Transportation System Assurance Officer Certification

The hierarchy below describes the general structure of the certification.

The upper layer (portrayed in blue) represents the 3<sup>rd</sup> tier of the certification, considered the most robust and the most difficult to attain. Those who reach this level will be certified across a range of modes, have detailed knowledge of Operational Risk Management and an in-depth understanding of Transportation System Assurance theory. This layer is considered suitable for those who occupy significantly senior planning positions, significantly senior coordination positions, or significantly senior advisory positions (e.g. an advisor or manager covering a medium to large geographic region)

The middle layer (portrayed in orange) represents the 2<sup>nd</sup> tier of the certification, considered advanced and challenging, if not difficult, to obtain. Those who reach this level will be certified across two modes, have a good understanding of local Operational Risk Management and a good understanding of Transportation System Assurance theory. This layer is considered suitable for those who occupy senior planning positions, senior coordinating positions (e.g. responsible for a major shipping hub).

The lower layer (portrayed in green) represents the 1<sup>st</sup> tier of the certification, considered intermediate and challenging to obtain. Those who reach this level will have a general understanding of Transportation System Assurance theory in addition to the certification pertinent to one mode. This layer is considered for those who occupy mid-level positions within an organization.

