

## Practice of HDM-4

This course is aiming at qualifying the specialist teams who are in charge of implementing the HDM4 model for road studies.

At the end of the course, the trainees will know the theoretical basis of the HDM4 model and will be able to use it :

- to define an optimal strategy for investment and maintenance,
- to compare various solutions for a road project,
- to define a roadwork programme.

Training will be based on the actual use of the latest version of the software (HDM4 – Version 2.0), which includes major enhancements.

### Public

*Road engineers who have an experience of road maintenance and basic economics.  
Economics or planners who have a good knowledge on road characteristics and maintenance.  
Participants must be completely familiar with computer use and Window.*

1st/07 to 12/07/2013

Paris

5800 € HT

978207

### Coordination

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consultant

### Project manager

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Registration/organisation

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### Week 1

#### ■ Model presentation

- HDM and road management,

- Functions, required data

#### ■ Strategy analysis (Exercise 1)

- Maintenance strategies,

- Definition of the study scope,

- Vehicle operating costs,

- Economic analysis,

- Bituminous roads deterioration

#### ■ Calibration (Exercise 2)

- Determination of calibration factors,

- Strategy analysis after calibration

### Week 2

#### ■ Project analysis : paving an unpaved section (Exercise 3)

- Unpaved roads deterioration,

- Generated traffic, exogenous BC,

- Sensitivity analysis,

- MCA

#### ■ Project analysis : new section and improvement (Exercise 4)

- Works effects,

- Traffic congestion effects

#### ■ Programme analysis : preparation of a pluriannual programme (Exercise 5)

- Asset evaluation,

- Optimization

#### ■ Import-Export (Exercise 6)

- Protection datas,

- Customising

- Training evaluation

Registration fees do not include the licence cost – please ask for condition of licence purchase if required Model presentation

# HDM-4 model, version 2.0

## Training Programme

**From July 1st to 5th - Week 1**

Day		Lectures	Hands on exercises
Day 1	am	Welcome	
		Introduction HDM-4 model	
	pm	HDM-4 model (cted)	
			Model installation and setup
Day 2	am		<b>Exercise 1, Strategy analysis</b> Configuration
			Vehicle Fleet input
	pm	Asset valuation	Road sections input
		Strategies	Works standards input preparation
Day 3	am		Rehabilitation design Works unit costs input
			Works standards input
	pm		Works standards input (cted)
			Study definition Runs
Day 4	am	Road User Costs Economic analysis	Reporting Results analysis
	pm	Optimisation	
		Bituminous roads deterioration	Solution exercise 1 <b>Exercise 2, calibration</b>
Day 5	am	Calibration	
			Section data input
	pm		Calibration factors calculation
			First week evaluation

## HDM-4 model, version 2.0

### Training Programme

**From July 8th to 12th - Week 2**

Date		Lectures	Hands on exercises
Day 6	am		Solution exercise 2
			<b>Exercise 3, Project analysis : paving an unpaved section</b>
	pm	Data management	Road Network input from a Road Data Base
		Unpaved roads	Works standards input
Day 7	am		Works standards input (cted)
			Study definition
	pm	Multi Criteria Analysis	Results analysis. Multi Criteria Analysis
		Traffic Works effects (bituminous pavements)	
Day 8	am		<b>Exercise 4, Project analysis : construction of a new section</b> Configuration Road Network input from a Road Data Base
			Works standards input
	pm		New construction standard input Study definition
		Traffic Congestion	Diverted traffic input Runs and results analysis
Day 9	am		Corrigé exercice 4
			<b>Exercise 5 Programme analysis : multi-year forward programme</b> Road Network input from a Road Data Base
	pm		Works standards input Study definition
			Results analysis
Day 10	am		<b>Exercise 6, export import</b> Data Saves.
		HDM history	
	pm		Miscellaneous
		Training evaluation	