



Course Reference: B1010W

## Workshop on Card Issuance Requirements



This 10-day workshop will guide Issuing Bank staff through the definition of a tailor-made EMV card issuance. It consists of two parts:

- Knowledge transfer (5 days) provides the right theoretical basis about EMV specifications and associated security mechanisms.
- Card Personalization Specification definition (5 days): during this interactive session, the consultant will help translating business requirements into technical EMV card content, and card issuance infrastructure requirements.

At the end of the workshop, the consultant will deliver a report specifying the bank's card personalization requirements. This document may be used as the reference document to Bank Personalization Bureau Providers.

### Objectives

At the end of the training, you will:

- Understand the EMV transaction (interaction between card & terminal)
- Master and take advantage from the security mechanisms implemented in EMV
- Understand the EMV card personalization
- Be ready to issue your first EMV card

### Key topics

- Introduction to EMV
- EMV Specifications
- EMV Issuance
- EMV Transaction Flow
- Personalization Templates

### Who should attend

Managers and decision-makers working in the banking and payment domain involved in the migration process, such as:

- Product Managers
- Security Managers
- Operations Managers
- Project Managers

### Each session consists of

- Complete training manual
- **Personalization Specification document**, delivered by the consultant 2 weeks after the end of the workshop

### Pre-requisites

- Basic technical knowledge about smart cards and Payment Systems
- This course is held in English. On customer request a session in French can be organized.

**Duration:** 10 days on-site


**Location:** customer premises

**Course fee:** € 19999<sup>1</sup>


<sup>1</sup> Price does not include taxes nor travel & expenses for the consultant on-site

For further information about registration and course schedule: please contact us via email to: [banking.training@gemalto.com](mailto:banking.training@gemalto.com) or visit our web site: <http://www.gemalto.com/>

## Course schedule

Day 1: Introduction to EMV	Practice
<p><b>Introduction to EMV</b></p> <ul style="list-style-type: none"> <li>Major differences between a magnetic stripe transaction and a chip transaction</li> <li>Analysis of the differences between the EMV specifications and the EMV implementations defined respectively by Visa and MasterCard</li> <li>Review of the major business benefits of the EMV chip card</li> <li>Visa and MasterCard liability shifts</li> </ul> <p><b>EMV Security Benefits</b></p> <p>Analysis of the security mechanisms defined in EMV to reduce fraud and limit the financial risk taken by an Issuer:</p> <ul style="list-style-type: none"> <li>Solutions provided by an chip EMV card to improve the security of offline transactions – advantages of offline transactions vs. online transactions</li> <li>Solutions provided by chip EMV card to improve the security of online transactions</li> <li>Selection criteria between the Offline authentication methods defined in EMV (SDA/DDA/CDA)</li> </ul> <p><b>General overview of the EMV card content</b></p> <ul style="list-style-type: none"> <li>Analysis of the data elements present in the EMV card: application selection data, cardholder data, system data, risk management data (Visa/MasterCard), cryptographic data</li> </ul>	
Day 2: Terminal Risk Management	Practice
<p><b>Terminal Risk Management</b></p> <ul style="list-style-type: none"> <li>Checks performed by the terminal</li> <li>Terminal Action Analysis</li> <li>Terminal Action Analysis after online processing</li> <li>Recommendations defined by Visa and MasterCard</li> </ul> <p><b>Cardholder Verification Algorithm</b></p> <ul style="list-style-type: none"> <li>Review of the possible methods available to an Issuer</li> <li>Analysis of the algorithm used by the terminal (CVM algorithm)</li> <li>Recommendations defined by Visa and MasterCard</li> </ul> <p><b>Card Authentication Methods</b></p> <ul style="list-style-type: none"> <li>Methods available at terminal level based on Public Key Infrastructure proposed by payment System (SDA / DDA / CDA)</li> </ul>	

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Day 3: Card Risk Management	Practice
<p><b>Card Risk Management defined by a Payment System (Visa or MasterCard)</b>            Depending on the customer's need, the trainer will detail the card decision algorithm, <b>either for Visa 1.4, or for M/Chip 4.0</b> (M/Chip 2.1 also available upon request)</p> <ul style="list-style-type: none"> <li>• Offline Transactions Management</li> <li>• Card Decision Process, first step</li> <li>• Card Decision Process, second step (after online authorisation)</li> </ul>	
Day 4: Card Risk Management (continued)	Practice
<p><b>Exercises on Card Risk Management</b></p> <ul style="list-style-type: none"> <li>• The trainee is set in front of practical cases of card usage: based on the card and transaction parameters, he/she shall find out the outcome of the transaction.</li> <li>• Alternatively, instead of the exercises, another Card Risk Management algorithm might be studied here.</li> </ul>	
Day 5: EMV Impacts on the infrastructure of an Issuing bank	Practice
<p><b>EMV Impacts on Card Issuance Process</b></p> <ul style="list-style-type: none"> <li>• General overview of the new information required for card issuance</li> <li>• New functions required in Card Data Preparation System</li> <li>• New functions required in Card Personalization System</li> <li>• Possible scenarios for Issuer Card Issuance Policy</li> <li>• Definition of the interface between an Issuer and a Service Bureau (chip personalization)</li> </ul> <p><b>EMV Impacts on Authorization/Clearing system</b></p> <ul style="list-style-type: none"> <li>• Analysis of the possible implementation scenarios for authorization:               <ul style="list-style-type: none"> <li>- Minimum impact of chip transaction on Authorisation System ("magstripe grade" / "early option")</li> <li>- Review of the possible implementation scenarios for "full chip"/"full option implementation"</li> <li>- New Stand-in Services related to chip data processing available at Visa or MasterCard</li> </ul> </li> <li>• Analysis of the possible impacts on Clearing System</li> </ul>	

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Days 6-10: Workshop on Personalization Requirements (5 days)	Practice
<p><b>Question &amp; Answers session about Personalization Requirements</b></p> <ul style="list-style-type: none"> <li>• Card architecture definition (information required for the configuration of the personalization software)           <ul style="list-style-type: none"> <li>- List of applications present in the card</li> <li>- Contents of the EMV applications (optional data elements selected, maximum length of the data element)</li> </ul> </li> <li>• Definition of the logical profile of the cards (information required for the configuration of the personalization data preparation system)           <ul style="list-style-type: none"> <li>- Definition of the value of each data element present inside a card</li> </ul> </li> <li>• Definition of the Bank Security requirements           <ul style="list-style-type: none"> <li>- PIN management</li> <li>- Triple DES keys management</li> <li>- RSA keys and RSA certificates management</li> </ul> </li> <li>• Definition of other interfaces           <ul style="list-style-type: none"> <li>- Embossing &amp; printing</li> <li>- Card Magstripe personalization</li> </ul> </li> <li>• Definition of Personalization Data File communicated to Personalization team</li> </ul> <p>At the end of this workshop, the Gemalto Consultant will provide to the Client a personalization specification document. The contents will be based on the decisions taken during the workshop. An annex of the document will contain list of the remaining decisions to take in order to fully specify the card personalization process.</p>	

### Related Courses:

EMV Business  
Impacts  
(B1001I)

Mastering EMV  
Implementation  
(B1002I)

Workshop on  
Card Issuance  
Requirements  
(B1010W)

International Payment  
Scheme Contactless  
Payment Seminar  
(B1008S)

Pre-Authorized  
Debit  
(B1006S)

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