

# XSLT (4 Days)

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## XSLT (CTI 516)

*This course provides the student with knowledge and skills in transforming XML documents using eXtensible Stylesheet Language Transformations, or XSLT. Intermediate and advanced techniques including variables and parameters, callable templates, sorting and grouping, tail recursion, working with multiple documents and XSLT extensions are covered.*

Prerequisites: Ability to read and write well-formed XML. Ability to read a DTD preferred, but not required.

Minimum software requirements: Microsoft Windows 2000 or Linux, command-line XML tools.

Minimum hardware requirements for all machines: Pentium 500MHz or equivalent CPU, 128 meg RAM, 50 meg disk space.

Microsoft PowerPoint and Internet access on instructor's machine for presentation purposes.

### Module 1: Getting Started with XSLT

- XSL and XSLT
- Rule-Based Transformations
- Templates
- Producing Text, HTML, and XML

### Module 2: XPath

- Addressing XML Content
- XPath in XSLT
- Tree Structure
- XPath Expressions
- Type Model
- Context
- Axis, Node Test, and Predicate
- Abbreviations
- Proximity Position
- XPath Functions
- Comparisons Between Various Types

### Module 3: Templates and Production

- Template Matching
- Built-In Template Rules
- Recursion Through Templates
- Template Context
- Output Methods
- Controlling Whitespace
- Literal Replacement Elements
- Formalizing Text, Elements and Attributes
- Defining Target Vocabulary
- Generating Processing Instructions

### Module 4: Dynamic Content and Flow Control

- Deriving Source Content
- Getting Source Values
- Attribute Value Templates
- Copying Source Elements and Trees
- Looping
- Conditionals

### Module 5: Variables and Template Management

- Variables
- Using Variables to Capture Context Information
- Result Tree Fragments
- Parameters
- Calling Templates Explicitly
- Global Variables and Stylesheet Parameters
- Template Modes

### Module 6: Sorting and Grouping

- Sorting
- Data Type for Sorting
- Grouping
- Uses for Grouping
- Using the Preceding-Sibling Axis
- Using XSLT Keys
- Iterating Over Groups
- Iterating Within a Group

### Module 7: Advanced XSLT

- Auto-Numbering
- Number Formatting
- XSLT Performance
- Computing Aggregate Values
- Tail Recursion

### Module 8: Multiple Documents and Transforms

- Merging Multiple Source Documents
- The XSLT Document Function
- Reusing Transformation Logic
- Including Transforms
- Importing Transforms

### Module 9: Extensions

- Extension Namespaces and Exclusions
- Extension Elements
- Extension Functions
- EXSLT
- Redirects
- Node-Set Conversion