

XPath for processing XML and managing projects

DHSI 2019 Course 49 (Week 2, 10–14 June, 2019)

[Course description](#) [Syllabus](#) [Resources and references](#) [Course Pack](#) [View on GitHub](#)

Schedule

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Monday, June 10: XPath

Introduction to XPath in eXist-db and <oXygen/> (10:15 a.m.–12:00 p.m.)

A. Getting started with XPath and eXide (15 minutes; 10:15 a.m.–10:30 a.m.)

[Expand](#) | [Collapse](#)

B. Simple XPath expressions (25 minutes; 10:30 a.m.–10:55 a.m.)

[Expand](#) | [Collapse](#)

C. XPath in <oXygen/> (20 minutes; 10:55 a.m.–11:15 a.m.)

[Expand](#) | [Collapse](#)

D. XPath path expressions (20 minutes; 11:15 a.m.–11:35 a.m.)

[Expand](#) | [Collapse](#)

E. XPath path steps (25 minutes; 11:35 a.m.–12:00 p.m.)

[Expand](#) | [Collapse](#)

Exploring document structures and data with XPath (1:30 p.m.–4:00 p.m.)

A. XPath functions for strings (25 minutes; 1:30 p.m.–1:55 p.m.)

[Expand](#) | [Collapse](#)

B. XPath functions for numbers (20 minutes; 1:55 p.m.–2:15 p.m.)

[Expand](#) | [Collapse](#)

C. XPath functions for sequences (15 minutes; 2:15 p.m.–2:30 p.m.)

[Expand](#) | [Collapse](#)

D. Looking Stuff Up: XPath function signatures and cardinality (10 minutes; 2:30 p.m.–2:40 p.m.)

[Expand](#) | [Collapse](#)

E. Break (10 minutes; 2:40 p.m.–2:50 p.m.)

F. XPath predicates (20 minutes; 2:50 p.m.–3:10 p.m.)

[Expand](#) | [Collapse](#)

G. Odds and ends (15 minutes; 3:10 p.m.–3:25 p.m.)

[Expand](#) | [Collapse](#)

H. Read and evaluate XML projects with XPath (35 minutes; 3:25 p.m.–4:00 p.m.)

[Expand](#) | [Collapse](#)

Tuesday, June 11: XPath and XQuery

XPath and XQuery in eXist-db (9:00 a.m.–12:00 p.m.)

A. Housekeeping: documents, collections, and namespaces (10 minutes; 9:00 a.m.–9:10 a.m.)

[Expand](#) | [Collapse](#)

B. The seven types of nodes (30 minutes; 9:10 a.m.–9:40 a.m.) [Expand](#) | [Collapse](#)

C. Neglected XPath axes (25 minutes; 9:40 a.m.–10:05 a.m.) [Expand](#) | [Collapse](#)

D. Scavenger hunt 1 (40 minutes; 10:05 a.m.–10:45 a.m.) [Expand](#) | [Collapse](#)

E. Break (10 minutes; 10:45 a.m.–10:55 a.m.)

F. Regex in XPath (35 minutes; 10:55 a.m.–11:30 a.m.) [Expand](#) | [Collapse](#)

G. Introducing variables (10 minutes; 11:30 a.m.–11:40 a.m.) [Expand](#) | [Collapse](#)

H. Introducing FLWOR (20 minutes; 11:40 a.m.–12:00 p.m.) [Expand](#) | [Collapse](#)

XQuery flow control (1:30 p.m.–4:00 p.m.)

A. Scavenger Hunt 2: in XQuery this time. (30 minutes; 1:30 p.m.–2:00 p.m.)

[Expand](#) | [Collapse](#)

B. Review XPath **for** loops; sequence and range variables (<oXygen/>) (20 minutes; 2:00 p.m.–2:20 p.m.) [Expand](#) | [Collapse](#)


C. **FLWOR** statements in XQuery: how **for** works: Part 1 (20 minutes; 2:20 p.m.–2:40 p.m.)

[Expand](#) | [Collapse](#)

D. Break (10 minutes; 2:40 p.m.–2:50 p.m.)

E. **FLWOR** statements in XQuery: how **for** works: Part 2 (30 minutes; 2:50 p.m.–3:20 p.m.)

[Expand](#) | [Collapse](#)

F.  Putting it all together: writing FLWORs to make new files (40 minutes; 3:20 p.m.–4:00 p.m.)

[Expand](#) | [Collapse](#)

Wednesday, June 12: XPath and XSLT

Introduction to XPath in XSLT (9:00 a.m.–12:00 p.m.)

A. Preparation for writing XSLT in <oXygen> (20 minutes; 9:00 a.m.–9:20 a.m.)

[Expand](#) | [Collapse](#)

B. XSLT overview in <oXygen/> (60 minutes; 9:20 a.m.–10:20 a.m.) [Expand](#) | [Collapse](#)

C. Break (10 minutes; 10:20 a.m.–10:30 a.m.)

D. Identity transformation for making changes to an XML file (50 minutes; 10:30 a.m.–11:20 a.m.)

[Expand](#) | [Collapse](#)

E. Comparing XSLT and XQuery (15 minutes; 11:20 a.m.–11:35 a.m.) [Expand](#) | [Collapse](#)

F. Preparing XSLT to output HTML from TEI XML (25 minutes; 11:35 a.m.–12:00 p.m.)

[Expand](#) | [Collapse](#)

XSLT Activity (1:30 p.m.–4:00 p.m.)

A. TEI XML to HTML transformation (70 minutes; 1:30 p.m.–2:40 p.m.)

[Expand](#) | [Collapse](#)

B. Break (10 minutes; 2:40 p.m.–2:50 p.m.)

C. XSLT activity: Making a linked table of contents (70 minutes; 2:50 p.m.–4:00 p.m.)

[Expand](#) | [Collapse](#)

Thursday, June 13: XPath and Schematron

Using Schematron to constrain your markup (9:00 a.m.–12:00 p.m.)

- A. Schematron overview (15 minutes; 9:00 a.m.–9:15 a.m.) Expand | Collapse
- B. Looking at Schematron (30 minutes; 9:15 a.m.–9:45 a.m.) Expand | Collapse
- C. Schematron error reporting (20 minutes; 9:45 a.m.–10:05 a.m.) Expand | Collapse
- D. XPath functions practice: Leipzig glossing rules, part 1 (20 minutes; 10:05 a.m.–10:25 a.m.)
Expand | Collapse
- E. Break (10 minutes; 10:25 a.m.–10:35 a.m.)
- F. XPath functions practice: Leipzig glossing rules, part 2 (40 minutes; 10:35 a.m.–11:15 a.m.)
Expand | Collapse
- G. The Three Stooges go to Schematron Summer Camp (25 minutes; 11:15 a.m.–11:40 a.m.)
Expand | Collapse
- H. One more way of counting spaces and hyphens (20 minutes; 11:40 a.m.–12:00 p.m.)
Expand | Collapse

Schematron and external files (1:30 p.m.–4:00 p.m.)

- A. ID/IDREF validation (25 minutes; 1:30 p.m.–1:55 p.m.) Expand | Collapse
- B. General comparison and value comparison (20 minutes; 1:55 p.m.–2:15 p.m.)
Expand | Collapse
- C. Schematron validation (25 minutes; 2:15 p.m.–2:40 p.m.) Expand | Collapse
- D. Break (10 minutes; 2:40 p.m.–2:50 p.m.)
- E. Exploring Digital Mitford (15 minutes; 2:50 p.m.–3:05 p.m.) Expand | Collapse
- F. Hamilton 1823-04-09 letter (25 minutes; 3:05 p.m.–3:30 p.m.) Expand | Collapse
- G. Webb 1819-05-16 letter (30 minutes; 3:30 p.m.–4:00 p.m.) Expand | Collapse

Friday, June 14: Taking stock

Putting it all to work (9:00 a.m.–12:00 p.m.)

- A. XPath in up-conversion: Syriaca taxonomy (60 minutes; 9:00 a.m.–10:00 a.m.)
Expand | Collapse
- B. Resources and references (25 minutes; 10:00 a.m.–10:25 a.m.) Expand | Collapse
- C. Break (10 minutes; 10:25 a.m.–10:35 a.m.)
- D. Building our syllabus (60 minutes; 10:35 a.m.–11:35 a.m.) Expand | Collapse
- E. Retrospective (25 minutes; 11:35 a.m.–12:00 p.m.)