Western Libraries
Collections Management Policy
Computer Science

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Purpose of the Collection

The computer science collection of Western Libraries is intended to support the research activities of faculty, students and staff as well as the instructional requirements of undergraduate and graduate programs. The collection also provides support for teaching and research in related fields such as engineering and the sciences.

The Taylor Library is the primary location for material supporting the research and instructional needs of the Computer Science department. A strategic priority of Western Librarians is to acquire and provide access to information in digital formats. A number of holdings for Computer Science are digital, making them available anywhere, anytime.

Program Information

In the department of Computer Science, there are undergraduate and graduate degrees offered in the following programs.

Undergraduate programs

• Major in Computer Science
• Minor in
  • Applications of Computer Science
    • Computer Algebra
    • Computer Science
    • Game Development
    • Software Engineering
    • Theoretical Computer Science
• Honors Specialization in
  • Bioinformatics (Biochemistry Concentration)
  • Bioinformatics (Computer Science Concentration)
    • Computer Science
    • Information Systems (can be combined with an Ivey HBA)
• Concurrent degrees
  • BSc in Computer Science and HBA from Ivey
    • BSc in Computer Science and LB from Western Law School
  • BSc in Computer Science and Bend from Western Engineering School

Graduate programs

• MSc in Computer Science (Thesis Option & Project Option)
• PhD in Computer Science (research-based)

**Subject Areas Covered**

Collections activity will address all aspects of computer science. In particular, collection development and management will focus on materials supporting the main areas of research interest for the Department, which include Vision and Image Processing, Distributed Systems, Computer Algebra, Bioinformatics and BioComputing, Theoretical Computer Science, Human Computer Interaction and Software Engineering, Artificial Intelligence, and Computer-Based Games. A more detailed listing of subject areas covered for both research and instruction can be found in the Appendix at the end of this document.

**Format**

Acquisitions will include monographs, book series, and journals. Resources, particularly journals, in digital format are preferentially selected over their print counterparts. Alternate formats, such as CD-ROM, video, DVD, and microform, are considered on an individual request basis.

**Language**

English is the primary language of collection. Materials in other languages may be acquired to support the curriculum. English translations of major works in other languages are also acquired.

**Source of Publication**

Sources of publication are primarily Canada, the United States, the United Kingdom, and Western Europe. Material published in other regions may be considered on request and will be evaluated for quality and relevance.

**Date of publication**
Materials with a recent imprint date are preferred. Older material will be considered upon request.

Exclusions

With the exception of individual requests and some selective acquisitions, the following types of material are not acquired:

• Computer or software manuals
• Conference proceedings
• Course textbooks at the lower undergraduate level
• Popular literature
• Theses or dissertations from other institutions (that are not included as part of the ProQuest Dissertations & Theses Database)

Related collections and cooperation

The Western Libraries’ collection for Computer Science is supplemented by collections in related fields, such as Electrical and Computer Engineering, Pure Mathematics, Statistics and Actuarial Sciences, and Applied Mathematics.

Gifts

The library gratefully accepts gifts of materials in good condition. As considerable expense is incurred by Western Libraries in the receipt and processing, the library only accepts gifts of materials which support current teaching and research needs, or which are not adequately represented in the collection.

Managing the Collection

In order to ensure that collections remain optimally useful for our patrons, it is necessary to analyze collection usage and available space regularly. Items will need to be selectively removed from the onsite collection from time to time.

Duplicate items that are no longer required to support the curriculum, and damaged items that can no longer be replaced may be removed from the collection at the discretion of the Subject Librarian.
Items that are unique to Western University may be transferred to a storage facility. Material housed in these storage facilities is available on request through the Library Catalogue.

Criteria for transfer selection include, but are not limited to, the following:

1) Outdated or previous editions of titles
2) Medium- to low-use items
3) Material that is available in alternate formats, i.e., online
4) Materials that would benefit from storage in a more controlled environment.

Consult the Subject Librarian for further details about these criteria.

**Resources to aid in acquisition of material**

- Subject collection profile developed in collaboration with book vendor, Coutts Information Services to capture publications that match relevant Library of Congress Subject Headings
- Websites of society publishers
- Catalogues from major publishers
- Direct requests from library patrons through the online form
Appendix – Detailed Subject Listing for Computer Science

Subject areas in support of research
(arranged by Library of Congress classification)

Calculating machines
  Algorithms
  Computer architecture
  Data mining
  Data structures
  Database design
  Database security
  Distributed processing
  Electronic computers. Computer science
    Computer software
      Compilers
      Data structures
      Intelligence agents
      Software engineering
      Software patterns
    Parallel processing. Parallel computers
  Programming
    Constraint programming
    Logic programming
    Parallel programming
  Programming languages
  Human-computer interaction
  Information visualization Natural language processing
  Object-oriented methods
  Quantum computers
  Supercomputers. High performance computing

Computer vision

Cybernetics
  Information theory
  Self-organizing systems. Conscious automata
    Artificial intelligence
      Computational Intelligence
      Distributed artificial intelligence
      Pattern recognition systems
  Machine learning
  Perception theory

Image processing
April 2012
Subject areas in support of instruction (U = Undergraduate; G = Graduate)

Advanced Automata Theory (G)
Advanced Machine Learning (G)
Advanced Topics in Computational Biology (G)
Advanced Topics in Image Compression (G)
Algorithms for Image Analysis (U & G)
Analysis of Algorithms (U & G)
Applied Logic for Computer Science (U)
Artificial Intelligence (U & G)
Biological Sequence Analysis (G)
Computer Architecture (U)
Computer Graphics (U)
Computer Network (U)
Computer Science Fundamentals (U)
Computer Software (U)
Computational Biology (U)
Computational Linguistics (G)
Computer Networks (G)
Cryptography and Security (U & G)
Data Mining and Applications (U & G)
Data Structures and Algorithms (U)
Database (U & G)
Database Security (G)
Distributed and Parallel Systems (U & G)
Empirical Research Methods (G)
Foundations of Computer Algebra (U & G)
Foundations of Programming of High Performance Computing (U)
Fundamentals of Computer Organization (U)
Game Design (U & G)
Game Development Project (U)
Game Engine Development (U & G)
Human Computer Interaction (U & G)
Image Compression (U & G)
Information Systems and Design (U)
Interfaces to Afford Accessibility (G)
Introduction to Computer Vision Techniques (G)
Introduction to Medical Computing (U)
Introduction to Modern SAT Solvers: Applications & Algorithms (G)
Introduction to Software Engineering (U)
Law in Computer Science (U)
Learning and Computer Vision (G)
Medical Informatics (G)
Multimedia and Communication (U)
Object-Oriented Design and Analysis (U)
Operating Systems (U)
Organization of Programming Languages (U)
Reasoning About a Highly Interconnected World (G)
Requirement Analysis (U & G)
Software Design and Architecture (G)
Software Maintenance and Configuration Management (U)
Software Project Management (U)
Software Tools and Systems Programming (U)
The Internet: Behind the Curtain (U)
Topics in Digital Ink & Handwriting Recognition (G)
Vision for Graphics
Web Development (U)