



CAREER PATHFINDERS

BACHELOR OF ARTS OR SCIENCE DEGREE WITH A MAJOR IN

APPLIED COMPUTER SCIENCE

Overview

The Applied Computer Science major is designed to prepare students in the following core areas: Programming Fundamentals (object-oriented, event driven, algorithms), Information Management (database systems, data modeling, data warehousing, relational databases, query languages), Software Engineering (software requirements and design, software process, software project management), Operating Systems, Net-Centric Computing (internet programming, networks, security), Human Computer Interaction (GUI Design and Programming), and Intelligent Systems (Machine Learning).

"I left the University of Winnipeg with strong computer programming and database design skills. As the Application Administrator for a large hospital information system I am able to put these skills into practice on a daily basis."

- Matthew Sodomsky (BSc) Application Administrator, Manitoba e-Health, Winnipeg Regional Health Authority

Job Titles

- Actuary (NOC 2161)
- Aerospace Engineer (NOC 2146)
- Air Traffic Controller (NOC 2272)
- Computer Aided Design Technician (NOC 2253)
- Computer Marketing Representative (NOC 0124)
- Computer Network Specialist (NOC 2281)
- Computer Programmer (NOC 2174)
- Consumer Loan/Credit Officer (NOC 6235)

- Cost Estimator/Analyst (NOC 2233, 2234)
- Financial Auditor (NOC 1111)
- Information Scientist (NOC 2173)
- Investment Manager (NOC 0122)
- IT Specialist (NOC 2171)
- Market Research Analyst (NOC 4163)
- Meteorologist (NOC 2114)
- Public Health Statistician (NOC 2161)
- Technical Support Specialist (NOC 2281)
- Quality Assurance Analyst (NOC 2171)
- Webmaster (NOC 2175) ¹

¹ The numbers following each job title refer to [Canada's National Occupational Classification \(NOC\) code](#). Jobs may require additional education or training.

Work Settings

- Aerospace Industry
- Construction Industry
- Consulting Firms
- Educational Institutions
- Financial Industry
- Government Agencies/Departments
- Health Agencies
- Insurance Companies
- IT Industry
- Manufacturing Industry
- Market Research Firms
- Marketing/Public Relations Agencies
- Media/Publishing/Telecommunications Industries
- Self Employed
- Software/Hardware Developers
- Software/Hardware Manufacturers
- Trade/Professional Associations
- Web-Based Companies

Skills and Characteristics

- Programming skills
- Research and design skills
- Planning and organizing
- Written and oral communication skills
- Meeting deadlines
- Statistical/data management skills
- Analytical and problem-solving skills
- Critical thinking skills and development of solutions to complex problems

Professional Associations and Other Links

- Canadian Association of Computer Science <http://cacsaic.org/>
- Canada's Association of I.T. Professionals <http://www.cips.ca/about>
- Computing Research Association <http://cra.org/>
- Government of Canada Job Bank <https://www.jobbank.gc.ca/studentdashboard/11.0701/LOS05>
- International Association of Computer Science and Information Technology <http://www.iacsit.org/>
- The Association for Computer Machinery <http://www.acm.org/>

This document is intended to provide a starting point for your career research. For more information about UWinnipeg's Applied Computer Science program, visit the [Department of Applied Computer Science website](#) and the [Applied Computer Science Fact Sheet](#).

Students are encouraged to [schedule an appointment with an Academic and Career Advisor](#) for assistance with career planning.
