



# The School of Health Information Science at the University of Victoria: Celebrating 25 Years of Contributions to Health Informatics

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The School of Health Information Science at the University of Victoria is celebrating its 25th anniversary in the year 2007. For twenty-five years it has been a leader in health informatics education, research and consultancy both at the national and international levels. The School of Health Information Science was the first post-secondary educational program in health informatics in Canada and is one of the most well-known programs in health informatics in North America. It has been a pioneering influence in health informatics education since its inception in July 1981 when Denis Protti was appointed Professor and Director. From the beginning, the educational program within the School was based on the idea that education in health informatics should provide students with a broad range of interdisciplinary skills and competencies in health informatics. The initial curriculum was based in part on the Association of Computing Machinery's Special Interest Group in Biomedical Computing 1979 model curriculum for programs in health computing.

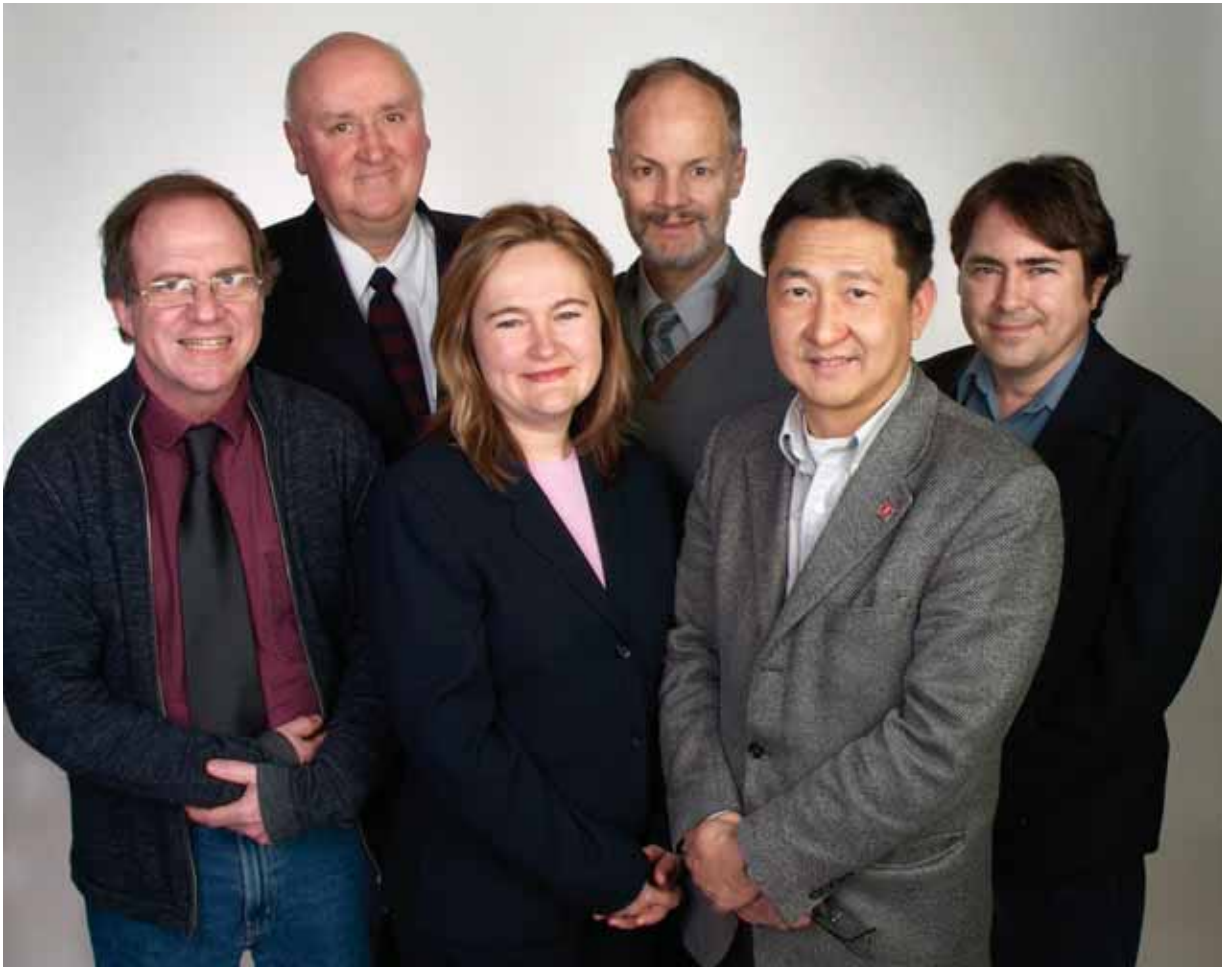
The first group of undergraduate health information science students received their degrees in May 1986 with all graduates being fully employed. In 1990 the School initiated its graduate program in Health Informatics, which has expanded to currently include an on-campus Master of Science degree program, an on-line Masters program as well as PhD in Health Information Science by special arrangement (with the first PhD in Health Information Science being granted to Jim McDaniel in 1994). In addition, the School has since added a second undergraduate degree program – a combined major in Health Information Science and Computer Science. The School has also pioneered an on-line Masters program in Health Informatics, where health informatics professionals can obtain a MSc in Health Informatics over two years while continuing to work in the field (with the first cohort of students in this program having completed their degree requirements in December, 2006).

The School of Health Information Science is one of the few schools or departments which is dedicated to health informatics and also offers a full range of programs and degrees in health informatics, from the Bachelor's level to the Masters and PhD levels. Currently there are approximately 500 graduates of the School who hold varied positions nationally and internationally. Alumni of the school work in varying roles as analysts, project managers, privacy officers, health information technology policy makers, managers, consultants, directors, chief information officers and academics in Canada and throughout the world.

Examples of some of our graduates who have provided important leadership in health informatics include Catherine Claiter (CIO of the Vancouver Island Health Authority), Jeremy Smith (former CIO of the Calgary Health Authority), Jennifer Zelmer (Vice President of CIHI) and Joanne Walker (partner at Courtyard Group). In addition PhD graduates, who have recently accepted appointments as faculty members in health informatics programs across Canada, include Dr. Stefan Pantazi and Dr. Craig Kuziemyky.

Graduates of our school, from the undergraduate to graduate, are highly sought after and statistics on job placements of our students indicates nearly 100% job placement within positions in health informatics. Upon graduation students typically receive multiple job offers from public and private sector employers in varying health care sectors, among them: acute and long-term care, public health, community and home care and local, provincial and national governments. Indeed, in recent years, the demand for graduates from the School of Health Information Science has continually exceeded the number of graduates.

The world of health care and health informatics has changed since the early 1980's. These changes underlie the need for health informaticians with interdisciplinary skills who possess a global understanding of problems along with the ability



Back (Left to Right): Denis Protti, Malcolm Maclune, Dr. André Kushniruk. Front: Dr. Scott Macdonald, Elizabeth Borycki, Dr. Francis Lau

to understand local problems as health information systems become more complex. With changes occurring in the world of health informatics, work on renewing and refining the undergraduate curriculum at the School of Health Information Science began in 2004.

Based on input from health informatics experts, practitioners as well as students and alumni of the School, it was felt that the initial focus of the program on providing interdisciplinary and practical training in a wide range of areas was particularly timely and well suited to the developments currently taking place in health informatics. In particular, the graduates of the School have been valued in industry for their global approach to problem solving and their interdisciplinary educational background. With the ever increasing rapid changes occurring in the health informatics, the background provided by the programs offered at the School has allowed students to adapt well and assume various leadership roles in health informatics. The updated curriculum has continued to focus on developing graduates of the program who possess specific and highly sought after technical skills, while at the same time having a global “holistic” perspective to health information science.

### **Experiential Learning in Health Informatics Education**

An emphasis of the health informatics program at the University of Victoria has always been its focus on experiential learning. Undergraduate students are required to take part in three four-month work terms staggered throughout the undergraduate degree program. The intent of the work terms is to complement the learning taking place in classrooms with practical experience in the field.

Our undergraduate students have held a variety of exciting and increasingly responsible co-op work term positions in a wide range of settings ranging from hospital informatics departments to private healthcare software companies, government agencies and health ministries, both provincially and federally. At the same time as emphasizing strong connections with the healthcare industry through the co-op program the School has also placed a strong and increasing emphasis on graduate and postgraduate education and research. Both are seen as complementary in order to ensure a School perspective that is relevant to industry but that at the same time takes into account the most recent advances in health informatics research.

Linkage between research and both undergraduate and graduate training is accomplished through teaching by faculty whose industry and research experience is significant. The School's faculty has worked in various industry roles ranging from clinical positions, project management, information officer and industry to government consulting. Teaching includes integration of case studies from real life situations, group projects with local health care organizations, and the introduction of students to real world work contexts and issues through invited presentations from a range of health informatics practitioners, managers and government officials to complement traditional classroom training.

### **Towards a Distributed Model of Health Informatics Education – on-line Masters Education in Health Informatics**

In summer of 2004 the School received approval to introduce a distributed on-line MSc degree program in health informatics, the first such degree program in Canada. The distributed MSc is a part-time program that requires completion of 10 courses and a project over a two year time period. The program is aimed at working professionals with one or more years of health or IT experience and students may remain at their work (throughout Canada and internationally) while taking the program. The program includes six online courses and eight senior faculty from the University of Calgary, the University of Alberta, the University of British Columbia and Simon Fraser University in addition to the regular University of Victoria courses and faculty members. The mode of offering courses includes the latest distance education technologies, including a combination of synchronous and asynchronous modes, except for two capstone courses offered each summer as 2-week intensive face-to-face workshops held at the University of Victoria.

Since the enrollment of the first students in January 2005 the on-line MSc program has grown to over 30 students. The backgrounds of students are varied, including physicians, nurses, pharmacists and IT professionals and managers working mostly in the health sector (a number of the students have funding support and/or protected time from their employers to enroll in the program). In June 2005 we completed the

first ever 2-week intensive workshop at the University of Victoria in health information management and information systems design. Feedback from the students has been extremely positive not only about the quality of the course content but also about the opportunity to network with faculty and peers as a learning community. A number of the students are now completing their required projects (which are to be work related and should be of benefit to their organizations in tangible ways). Examples of such projects include the study of privacy issues in genomics laboratory information systems, the usability study of emergency triage and guidelines systems, and development of an e-health strategy for First Nations communities.

### **Conclusions and Invitation to Celebrate**

The School of Health Information Science at the University has provided an integrated approach to health information science training for twenty-five years. The approach taken has been based on the concept that health informaticians need to possess specialized skills in areas related to information technology, organizational science and health studies. In addition, it is the philosophy of the School that students must develop strong integrative and "holistic" capabilities and skills in order to successfully keep up with and provide leadership in the ever changing field of health informatics. Towards this end, the School has recently reviewed and updated its undergraduate educational program and has worked towards developing and expanding its graduate training through new programs and initiatives, including the Distributed on-line Masters program in Health Informatics (the first on-line MSc program in Health Informatics in Canada).

Current planning at the School includes preparation for a major international conference being held in Victoria from February 15-18 – ITCH 2007 (<http://hinf.uvic.ca/itch/index.htm>) which will bring together leading experts in health informatics from both industry and academia – all are welcome to register. In addition, in celebration of the School's 25th anniversary, a special alumni event will be held in Victoria during that period – we hope to see as many out for this event as possible to help celebrate this exciting milestone! ●



### **TODAY'S INFORMATION for TOMORROW'S IMPROVEMENTS**

February 15 – 18, 2007 Laurel Point Inn, Victoria, BC, Canada

An international conference addressing  
Information Technology and Communications in Health (ITCH)