



## **UK – Canada Workshop in Nuclear Skills March 2006**



## McMaster University

- Established in 1887
- 65 km SW of Toronto / 70 km SE of Waterloo
- 24,000+ undergraduate and graduate students
- 1,017 full-time faculty
- 6 Faculties – health sciences, engineering, business, humanities, science, social science
- 140 undergraduate degree programs
- Students & faculty from 70+ countries
- 40+ international exchange agreements
- Among the Top 10 best places to work in academia





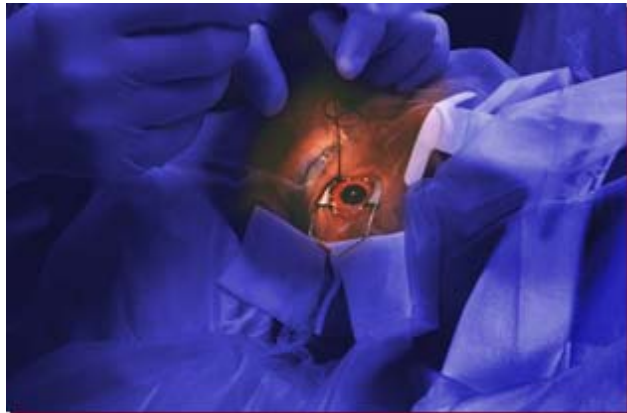
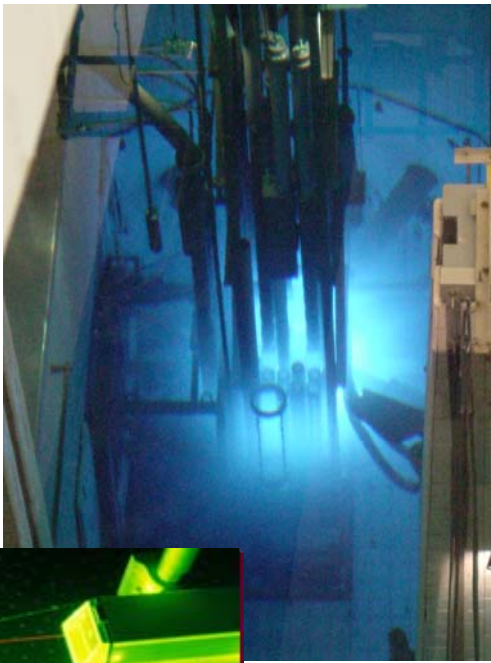
## McMaster University

- Canada's Research University of the Year 2004
- Ranked Canada's most innovative university
- 3<sup>rd</sup> most research-intense university in Canada
  - 2,000+ funded research projects
  - \$218 million in sponsored research income
  - \$214,000 research / full-time faculty
- Top 20 in world with a Health Sciences Faculty
- Ranked among the top 100 universities in the world
- 37-acre McMaster Innovation Park in development



## McMaster University

- Areas of research excellence:
  - molecular medicine
  - biotechnology
  - photonics
  - nano-science and -technology
  - information technology
  - intelligent machining
  - manufacturing & materials science
  - mechanical & software engineering
  - telecommunications
  - cardiovascular research
  - strategic business studies
  - e-business
  - humanities computing



## Affiliated Research Institutes & Centres

- Antimicrobial Research Centre
- Institute for Molecular Medicine and Health
- Institute for Molecular Biology and Biotechnology
- Centre for Minimal Access Surgery
- Brain-Body Institute
- Henderson Research Centre
- Juravinski Cancer Centre
- Brockhouse Institute for Materials Research
- Centre for Emerging Device Technologies
- Centre for Research in Micro- and Nano-systems
- McMaster Manufacturing Research Institute
- McMaster Nuclear Reactor**
- McMaster Institute for Applied Radiation Sciences**
- McMaster Institute for Polymer Production Technology
- Origins Institute
- McMaster Institute for Music and the Mind



## Faculty of Engineering

- Top-10 Faculty of Engineering in Canada
- 2,900+ undergraduate students
- 660+ graduate students
- 130+ faculty

### Departments:

- Chemical
- Civil
- Computing & Software
- Electrical & Computer
- Engineering Physics
- Materials Science & Engineering
- Mechanical

### Leading-Edge Programs:

- Chemical & Bioengineering
- Electrical & Biomedical
- Engineering & Management
- Engineering & Society
- Environmental
- Nanotechnology
- Nuclear Engineering
- Photonics
- Software Engineering & Game Design
- Bachelor of Technology (B.Tech.)



## Faculty of Science

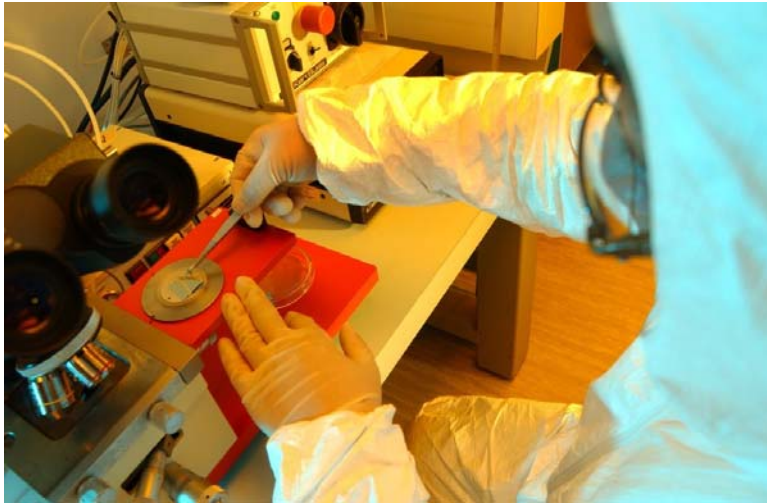
- 4,000 undergraduate students
- 400 graduate students
- 200 faculty

### Departments/Schools:

- Biology
- Chemistry
- Geography & Earth Sciences
- Mathematics & Statistics
- **Medical Physics & Radiation Sciences**
- Physics & Astronomy
- Psychology, Neuroscience & Behaviour

### Leading-Edge Programs:

- Origins Studies
- **Mohawk-McMaster Medical Radiation Sciences Program**
- Environmental Science
- Biochemistry & Biomedical Sciences
- Computational Engineering and Science
- Materials Science & Engineering
- Genetics
- Pharmacology
- Chemical Biology



## Faculties of Engineering & Science

- Student-centered, research intensive
- 35 research centres and institutes
- 11 Centres of Excellence
- \$62 million in current research programs
- 300+ research projects with private & public sectors
- 23 Canada Research Chairs
- 10 Endowed Chairs
- **7 NSERC Industrial Research Chairs**

## McMaster University – Partnerships

### ▪ Industrial Research Chairs

- NSERC Industrial Research Chair in Precision Machining
- NSERC-Mitel Professor of Signal Processing
- NSERC Fuel Cell Technologies Chair in Solid Oxide Fuel Cell System
- NSERC/RIM/CITO/McMaster Industrial Research Chair in Pico-Cellular Wireless Internet Access Networks
- NSERC/Dalsa/McMaster Industrial Research Chair in Digital Cinema
- NSERC/Stelco Associate Industrial Research Chair in Steel Product Application
- **NSERC/UNENE Industrial Research Chair in Nuclear Safety Analysis**





## Science and Engineering Popularisation Programmes

- Venture Engineering & Science
- Let's Talk Science
- Yes I Can! Science
- Shad Valley
- Brockhouse Lectures and Summer School
- Science in the City
- MACafé Scientifique
- Innovation Café
- Interactions with national and international media

**XEROX**



## Faculty of Engineering – New Initiatives

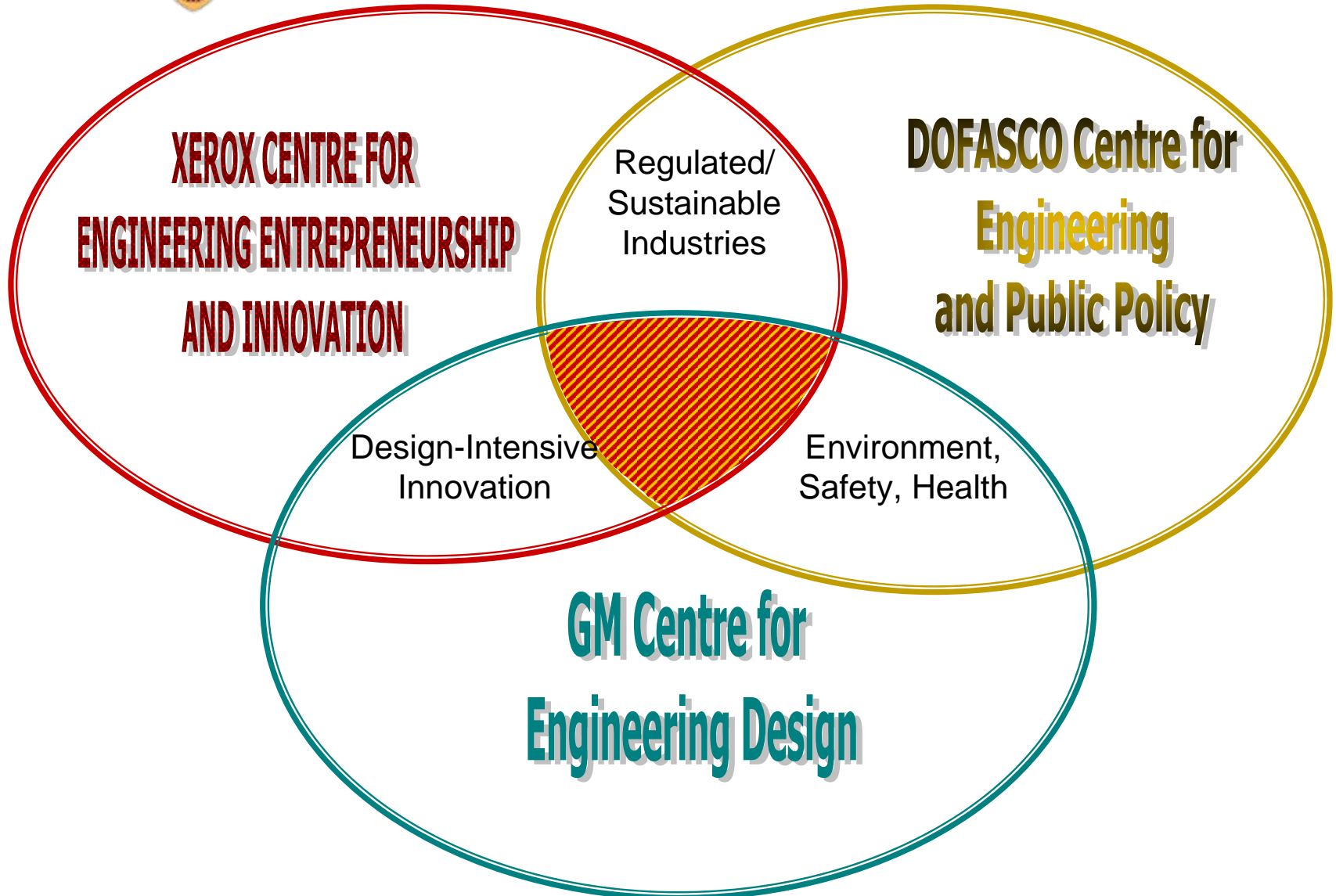
### ▪ New School for Engineering Practice

- Xerox Centre for Engineering Entrepreneurship & Innovation
- Dofasco Centre for Engineering Public Policy
- General Motors Centre for Engineering Design

### ▪ New School of Biomedical Engineering

- MDA Medical Robotics Lab
- Bell University Laboratories Integrated Systems Lab
- Five additional Labs planned

# School for Engineering Practice





## McMaster University - Research Consortia

- Ontario Photonics Consortium (OPC)
- Steel Research Centre (SRC)
- McMaster Institute for Energy Studies (MIES)
- **University Network of Excellence in Nuclear Engineering (UNENE)**
- Centre for Automotive Materials and Manufacturing (CAMM)



## McMaster Innovation Park

- 37 acres under development
- CANMET - Materials Technology Lab
- **Sustainable Energy Systems Laboratories**
- GM Canada Centre for Corrosion Engineering Research
- Golden Horseshoe Biosciences Network



# McMaster Innovation Park



Inspiring Innovation and Discovery





## **UK – Canada Workshop in Nuclear Skills March 2006**