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Career & Cooperative Education

Health-Related Alternatives to Medical School

What's your back-up plan? Look here for some alternatives to Medical School in the health industry.

Biostatistician/Epidemiologist

Description

- Biostatisticians and Epidemiologists use mathematics and statistics to study patterns of disease and their treatments. They compile, analyze and report health-related information.
- They may perform the following tasks:
 - Determine the percentage of a population likely to contract a certain disease.
 - Approximate the likelihood of disease transmission.
 - Interpret data from clinical trials in order to determine the best method of disease intervention.
- Biostatisticians and Epidemiologists usually work in a university setting, government health offices or companies in the biopharmaceutical industry.

Education

- Ontario Universities offering graduate programs in Biostatistics & Epidemiology include:

McMaster University
Queen's University
University of Ottawa

University of Western Ontario
University of Toronto

Child-Life Specialist

Description

- Child Life Specialists investigate the social, emotional and physical responses of a child and family to issues such as hospitalization, illness and abuse. They design therapeutic interventions to promote coping with these issues.
- Child Life Specialists often collaborate with children, families, health care workers and community centers in order to plan play programs. These play programs are designed to foster the psychosocial needs of children in a safe and supportive environment.

Education

- The following schools in Canada offer Child Life Education Programs:

McMaster University
University of Victoria

University College of the Fraser Valley

Clinical Trials Coordinator

Description

- A Clinical Trials Coordinator is responsible for:
 - Organizing and managing clinical trials, usually as part of a team.
 - Maintaining clinical trial supplies, patient recruitment and research grants.
 - Understanding the ethics, standards and safety regulations associated with clinical trials in Canada.
 - Preparing for pharmaceutical company audits.
- A Clinical Trials Coordinator usually finds employment in pharmaceutical, hospital or university-based labs.

Education

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- Generally, a Clinical Trials Coordinator usually has an honors degree in science or health sciences with experience conducting clinical trials. The number of years of experience required for each position varies.
- McMaster University offers a Certified Clinical Research Associate (CCRA) Program which exposes students to the academic and practical coursework required to conduct successful clinical trials.

Ergonomics

Description

- Ergonomics is the scientific discipline concerned with the interaction of humans and other elements of a system (e.g. tools, equipment, technology). The profession applies data, methods, principles and theories in order to optimize human well being and overall system performance.
- Ergonomists usually work in hospitals and physiotherapy clinics, or may be associated with computer companies in both public and private sectors.

Education

- Ontario schools offering graduate programs in ergonomics or ergonomics-related fields include:

McMaster University
University of Waterloo

University of Windsor
York University

Genetic Counseling

Description

- Genetic counselors are health professionals who help families make personal decisions about pregnancy and childcare by providing information on birth defects and mechanisms of inheritance.
- A genetic counselor may work with the following populations:
 - Women over the age of 35 who are pregnant or planning to be.
 - Families with genetic disorders such as Down syndrome, Huntington's disease, cystic fibrosis, muscular dystrophy, hemophilia, PKU and other inherited disorders.
- A genetic counselor may work in hospitals, prenatal settings, pediatric genetic centers or cytogenetic lab testing.

Education

- Canadian Schools offering Masters Programs in Genetic Counseling include:

McGill University
University of British Columbia

University of Toronto

Industrial Hygienists

Description

- An Industrial Hygienist identifies and controls biological, chemical and physical hazards in industrial settings in order to maintain health and safety in the workplace. Other issues they may address include workplace air quality and noise.
- An Industrial Hygienist is usually employed by insurance, chemical and waste management firms. They may also be employed by hospitals, consulting firms and government agencies.

Education

- The minimum educational requirement for this career includes a Bachelor's degree in Chemistry, Physics, Engineering, or a closely related area in the Biological Sciences. A Master's degree may be required for positions in public administration or industrial management.
- Industrial Hygienists must pass an exam and obtain licensure from the Canadian Registration Board of Occupational Hygienists (CRBOH).

Infection Control Practitioner

Description

- Infection Control Practitioners primarily monitor infections that originate in hospitals or hospital-like settings.
- They are responsible for designing infection prevention programs, which may involve implementing control policies and procedures, coordinating educational programs and acting as a consultant for the purchase of decontamination and disinfection equipment. Additionally, they are responsible for writing reporting their findings to public health authorities.

Education

- In Ontario, Infection Control Practitioners usually meet all, or most of, the following qualifications:
 - A Bachelors degree in a Health Science related field.
 - Certification as a regulated health professional (Nurse or Laboratory Technologist).
 - Member of the Community and Hospital Infection Control Association (CHICA).
 - Licensure through the Certification Board of Infection Control and Epidemiology (CBIC).

Massage Therapist

Description

- Massage therapists are health care professionals who use various massage techniques for therapeutic means including:
 - Improved circulation.
 - Improved functioning of muscles and joints.
 - Relief of pain and stress (without use of medication).
 - Recovery from injury and promotion of the body's natural self-healing processes.
- They may specialize in many areas including Swedish massage, sports massage and pressure point therapy.

Education

- In Ontario, Massage Therapists usually possess a diploma in massage therapy.
- Additionally, they must pass written and practical exams administered by The College of Massage Therapists of Ontario. The written component is an online multiple choice examination. The practical component consists of four 15 minute stations with scenarios that massage therapists often encounter.
- Schools offering massage therapy programs include:

Canadian College of Massage and Hydrotherapy
Canadian Therapeutic College

Sutherland –Chan School and Teaching Clinic
International Academy of Massage

Medical Librarian

Description

- Medical Librarians are responsible for providing information to medical staff as well as hospital administrators and employees. They are highly competent in library automation systems as well as computer databases and database searching techniques.
- Medical Librarians may review vast amounts of information and analyze, evaluate and organize it based on the company's needs. They may also be trained webmasters or web developers who set up information on the internet.

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Education

- Canadian Schools offering MLS Programs:

Dalhousie University
McGill University

University of Toronto
University of Western Ontario

Microbiologist

Description

- A Microbiologist studies the growth pattern and characteristics of microorganisms, and the way they interact with other organisms and their environment.
- A Microbiologist may work in laboratories affiliated with post-secondary institutions, government agencies and hospitals. Currently, they are mainly employed in agricultural, environmental, food research and energy sectors.

Education

- The minimum educational requirement for this career usually includes a Bachelors degree in Biology, with a specialization in Genetics or Microbiology, or a degree in Biochemistry or Chemistry. Post-Graduate education is required for senior research positions.
- Visit the Association of Universities and Colleges of Canada (AUCC) at http://www.aucc.ca/can_uni/search/index_e.html or www.schoolfinder.com to search for universities offering programs in these areas.

Nurse Aide

Description

- Assist registered nurses, physicians and hospital staff in caring for patients. This may involve: serving meals to patient; bathing, dressing and grooming patient; lifting turning or massaging patient; taking patients blood pressure, temperature, respiration and pulse.
- Perform general tasks including: answering call signals, delivering messages, making beds, maintaining inventory and cleaning supplies.

Education

- There are three avenues through which one can become a nurse aide:
 - Complete secondary school education + on-the-job training
 - Complete a nursing aide or health care aide program at a college or private institution
 - Complete a college nursing orderly program + on-the-job training

- Schools offering Nurse Aide Programs:

Career Canada College
Grand Health Academy

National College

Optician

Description

- An optician is an eye care professional who makes corrective lenses and eyeglasses to correct vision defects.
- Note the distinction between an optometrist and an optician. An optometrist performs eye examinations and writes prescriptions for lenses and glasses. An optician makes these lenses and glasses.*

Education

- To become an optician, students must enroll in an Ophthalmic Dispensing Eyeglasses Program. In Ontario and Quebec, this program qualifies individuals to dispense *both* eyeglasses and contact lenses. In all other

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provinces, this program only qualifies individuals to dispense eyeglasses and they must complete an additional program in order to be qualified to dispense contact lenses.

- After completing an Optical Program, one must pass a national licensing exam and apply for registration through their provincial regulatory body. In Ontario, the regulatory body is called the College of Opticians of Ontario.
- There are only two educational institutions in Ontario offering Optical Programs:

Georgian College

Seneca College

Prosthetists & Orthotists

Description

- Both careers involve the rehabilitation of individuals. Prosthetists are involved with the replacement of missing limbs. Orthotists are involved with the support and control of motion of a weakened body part.
- Many practitioners work in hospitals, medical centers or private offices. It is common for practitioners to provide services on an outpatient basis, as well as to inpatients at a rehabilitation unit or nursing facility.

Education

- There are only three institutions that offer Prosthetic & Orthotic Programs in Canada:

George Brown College

Collège Montmorency

British Columbia Institute of Technology

Radiation Therapist

Description

- Radiation Therapists treat cancer and other diseases using ionizing radiation, a type of energy that damages or destroys the genetic material in rapidly proliferating, cancerous cells.
- Radiation Therapists usually work in cancer centers or with government agencies to regulate radiation safety practices.

Education

- Radiation Therapists must successfully complete a Radiation Therapy Program at an accredited institution. Programs are offered through the following institutions in Ontario:

Joint Michener Institute and University of Toronto Medical Radiation Science (Nuclear Medicine) Program

Mohawk-McMaster Medical Radiation Sciences Program

Sex Therapist

Description

- A sex therapist uses a range of therapeutic processes and exercises to help individuals or couples restore or enrich the intimacy in their lives.
- Sex therapists help individuals develop emotional, mental, physical, psychological and sexual well being so that they may experience healthy sexual functioning.

Education

- Sex therapists may have a range of degrees in the following fields: family and marital therapy, medicine, nursing, psychology or sexology.
- All Sex Therapists in Ontario must be licensed by the Board of Examiners in Sex Therapy and Counseling in Ontario (BESTCO). Requirements for licensure are listed on the BESTCO website:

<http://www.bestco.info/membership.htm>

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Technologist /Technician

Description

- Technologists/Technicians are individuals who are trained to operate specialized equipment in a specific field. For example, an X-Ray Technologist is responsible for operating and maintaining x-ray equipment. While an X-Ray Technologist may be responsible for recording patient results, it is the doctor's responsibility to interpret those results and relay them to the patient.
- Examples of Technologists/Technicians required in a health care setting:

Biomedical Technologist
Echocardiograph Technologist
Heart Investigation Unit (HIU) Technician
Medical Diagnostic Unit (MDU) Technician
Medical Laboratory Technologist
Medical Resonance Imaging (MRI) Technologist

Nuclear Medicine Technologist
Ophthalmic Technician
Orthopedic Technologist
Pharmacy Technician
Ultrasound Technologist
X-Ray Technologist

Education

- Many colleges offer diploma or certificate programs in these areas. To search for colleges offering your program of interest, visit: www.ontariocolleges.ca or www.schoolfinder.com.

Therapeutic Recreationist

Description

- Therapeutic Recreationists use recreational activities and leisure experiences in order to improve the lives of those with social, physical and cognitive limitations.
- They may perform the following tasks:
 - Assess client skills, needs and interests in recreation and adapt recreational activities to these factors.
 - Communicate the benefits of participation in recreational activities and encourage clients to set participation goals in recreational activities.
 - Chart client progress and difficulties and make amendments to treatment plans.
- Therapeutic recreationists often work in environments that involve strenuous physical activity. They usually find employment in hospitals, continuing care, residential care facilities and recreation and community centers.

Education

- Therapeutic Recreationists usually have a degree or diploma in recreation with a specialization in therapeutic recreation.
- After completion of a degree or diploma, certification with a provincial regulatory body is required in order to practice as a therapeutic recreationist. In Ontario, this regulatory body is called Therapeutic Recreation Ontario: <http://www.trontario.org/>
- The following schools in Ontario offer Therapeutic Recreation programs:

Brock University
Georgian College

University of Waterloo

Other Alternatives

More information Education Planning and professional school options visit the SCCE website.