

# Health Care & Health Sciences Career Pathways



Your guide to  
high-demand jobs  
in Western New York.

# Why a Career in Health Care & Health Sciences?

*Did you know that health care is the largest and fastest growing industry in the U.S.?*

Or that the health care industry employs over 10 million workers in more than 200 kinds of careers?

## *Opportunities abound in the Health Care Industry.*

Due to the explosion of new technology as well as an unprecedented aging population, there is a current and projected shortage of workers – creating a crisis in health care across this country. As a result, today's health sciences professionals are in high demand not just across the nation, but also locally, right here in Western New York.



If you're looking for a meaningful career that offers a lifetime of opportunities and the ability to help others, consider a career in health sciences. There are literally hundreds of career options within health sciences –

*so there's sure to be one that's a terrific fit for you!*



# Career Pathways in Health Care & Health Sciences

Careers in health sciences are divided into five categories, or pathways. Occupations are grouped by the common knowledge and similar skill sets required within each career pathway.

*The five pathways in  
Health Care & Health Sciences include:*



1. **Therapeutic Services**
2. **Diagnostic Services**
3. **Health Informatics**
4. **Support Services**
5. **Biotechnology  
Research & Development**

## Places to Work

Professionals within these health sciences career pathways work in a variety of health care and corporate settings, including:

- ▶ Hospitals
- ▶ Independent Laboratories
- ▶ Clinics
- ▶ Public Health Facilities
- ▶ Biotechnology Companies
- ▶ Molecular Diagnostic Companies
- ▶ Vitro Fertilization Laboratories
- ▶ Research Laboratories
- ▶ Nursing Homes
- ▶ Physician Offices
- ▶ Medical Equipment Supply Companies
- ▶ Home Health Care Agencies
- ▶ Diagnostic Centers
- ▶ Educational Institutions
- ▶ State and Local Health Departments



# Pathway #1: Therapeutic Services

Health professionals in Therapeutic Services work directly with patients, providing care, treatment counseling, and health education information. Most therapeutic careers require certification, registration, or licensure by a national professional organization or by the state in which you practice. To the right is an example of just one of the careers within the Therapeutic Services pathway – Respiratory Therapist.



# ▶ Respiratory Therapist

Respiratory Therapists evaluate and care for patients with breathing and other cardiopulmonary disorders. Their patients range from the smallest premature infants to the elderly. Respiratory Therapists provide a variety of diagnostic and therapeutic treatments.

These include the administration of oxygen and other medically necessary therapeutic gases; aerosolized medication delivery; and bronchopulmonary hygiene techniques. Respiratory Therapists also operate sophisticated life support equipment which assists in breathing for patients.



## Education Requirements

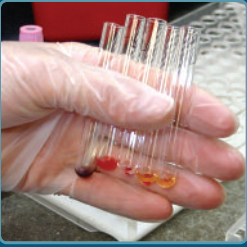
- ▶ Associate's Degree in Respiratory Care.
- ▶ Upon graduation, you will be eligible to take exams to receive both the Certified Respiratory Therapist (CRT) and Registered Respiratory Therapist (RRT) credentials. Both exams are conducted by the National Board for Respiratory Care (NBRC).
- ▶ To work as a Respiratory Therapist, most states, including New York State, require a license.

**Average WNY Salary: \$51,920**

## Other occupations in the Therapeutic Services pathway include:

- ▶ Certified Nurse Assistant
- ▶ Dental Hygienist
- ▶ Paramedic
- ▶ Pharmacist
- ▶ Physical Therapist
- ▶ Physician
- ▶ Registered Nurse
- ▶ Licensed Practical Nurse
- ▶ Surgical Technologist

# Pathway #2: Diagnostic Services



Professionals in the Diagnostic Services pathway use tests and evaluations to detect, diagnose, and treat diseases, injuries, or other physical conditions. Most Diagnostic Careers require an Associate's or Bachelor of Science degree. Most states require certification, registration, or licensure by a national professional organization. An example of a career in this pathway is that of a Nuclear Medicine Technologist – shown at right.



# ► Nuclear Medicine Technologist

Nuclear Medicine Technologists use drugs with a small amount of radioactivity (called radiopharmaceuticals) to study the function of the internal organs and treat disease. These radiopharmaceuticals are introduced into the body through injection, inhalation, or ingestion. Using sensitive instrumentation, the technologist can then obtain useful images of the structure and function of the specific organ in question.

## Education Requirements

- You can enroll in programs that last from one to four years through hospitals, colleges, and universities, and receive a certificate, Associate's degree, or Bachelor's degree.
- You must then pass a national certification exam offered by the American Registry of Radiologic Technologists or the Nuclear Medicine Technology Certification Board and apply for the New York State license, which is required to practice.



**Average WNY Salary: \$56,420**

## Other occupations in the Diagnostic Services pathway include:

- Diagnostic Medical (Ultra) Sonographer
- Echocardiographer
- Geneticist
- Medical Lab Technician (MLT)
- Medical Technologist (MT)
- Pathologist
- Phlebotomist
- Radiological Technologist

# Pathway #3: Health Informatics

Careers in the Health Informatics pathway include many different types of positions, from health care administrators to those responsible for managing patient data. Some careers require an Associate's or Bachelor's degree in computer science; however, many of these careers require on-the-job training and/or certification. The next page shows an example of a career within Health Informatics.



# ▶ Health Information Technician

Health Information Technicians help health information administrators review medical records, retrieve and compile data, and assist in the proper storage, maintenance, and retrieval of medical records. Health Information Technicians also control access to information contained within medical records to maintain confidentiality.



## Education Requirements

- ▶ You must earn an Associate's degree in Health Information Technology from a program accredited by the American Medical Association in conjunction with the American Health Information Management Association (AHIMA).
- ▶ You are then eligible to take the national registration examination offered by AHIMA to become a Registered Health Information Technician.

**Average WNY Salary: \$37,470**

## Other occupations in the Health Informatics pathway include:

- ▶ Admitting Clerk
- ▶ Data Analyst
- ▶ Health Information Coder
- ▶ Medical Biller
- ▶ Medical Information Technologist
- ▶ Medical Librarian
- ▶ Reimbursement Specialist

# Pathway #4: Supportive Services



## Careers in the Supportive Services

pathway provide a therapeutic environment for the delivery of health care. Supportive Services offer a full range of career opportunities from entry level to management and include both technical and business/professional careers. Salaries vary depending on the specific occupation you choose within this pathway. Shown at right is an example of a career in this pathway – that of Maintenance Technician.



# ► Maintenance Technician

Maintenance Technicians provide skilled services for the repair, replacement, modification and installation of physical plant and other equipment. As such, reading and interpreting technical manuals, plans, specifications, drawings and sketches is combined with the ability to repair, rebuild and install equipment using know-how in electrical, plumbing, and carpentry.

## Education Requirements

- Supportive Services careers have workers with varying levels of education; some positions may require an Associate's or Bachelor's degree, others may not.
- Most employers also offer extensive on-the-job training with ample opportunity for advancement.
- Many opportunities exist in the Health Sciences for a career in Supportive Services. Contact your career counselor to help determine the best match between your skills and interests and a future career.



**Average WNY Salary: \$47,500**

**Other occupations in the Supportive Services pathway include:**

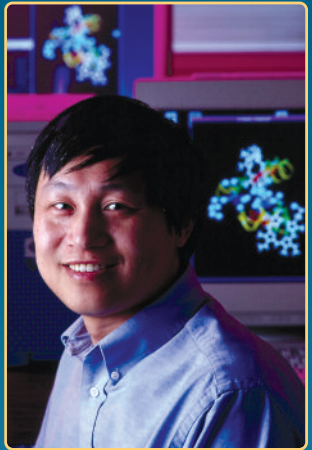
- Automation Control Specialist
- Biomedical/Clinical Engineer
- Central Services Technician
- Dietary/Food Services Technician
- Electrical Maintenance Technician
- Environmental Services Technician
- Maintenance Engineer
- Materials Management Technician
- Property Maintenance Technician

# Pathway #5: Biotechnology Research & Development



Careers in the Biotechnology Research & Development pathway involve bioscience research and development as it applies to human health. These scientists may study diseases to discover new treatments or invent medical devices used to assist patients.

Such careers require a solid foundation in high school sciences – biology, chemistry, math, and computer science. An Associate's, Bachelor's, or Master's degree is also usually necessary and in most cases a state license is required. At right is an example of a career in this pathway.



## ▶ Medical Technologist (MT)



Medical Technologists have the opportunity to work in clinical laboratories, university research laboratories, and the pharmaceutical and medical device industry. Their skills in the laboratory are used to diagnose disease, to study mechanisms by which diseases occur, and to develop new biomedical products for disease prevention and treatment.

Duties and responsibilities include: performing laboratory tests and experiments, confirming the accuracy of results, and assisting in

reporting and publishing research and test findings.

### Education Requirements

- ▶ You'll need a Bachelor's degree in Medical Technology/Clinical Laboratory Science and a clinical education component approved through the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS).
- ▶ While attending school, you can work part-time in a laboratory to earn extra money and then begin full-time work upon graduation.

**Average WNY Salary: \$49,230**

**Other occupations in the Biotechnology Research & Development pathway include:**

- ▶ Bioinformatics Specialist
- ▶ Biostatistician
- ▶ Medical Lab Technician (MLT)
- ▶ Microbiologist
- ▶ Molecular Biologist
- ▶ Pharmacist
- ▶ Pharmacologist
- ▶ Research Assistant

# WNY Education & Training

## for a Career in Health Care & Health Sciences

### Canisius College

(716) 888-2346 • [www.canisius.edu](http://www.canisius.edu)

*Academic Programs for:*

- ▶ Medical Technologist (MT)/Clinical Laboratory Scientist

### Erie 1 BOCES

(716) 821-7000 • [www.e1b.org](http://www.e1b.org)

*Academic Programs for:*

- ▶ Licensed Practical Nurse
- ▶ Phlebotomist

### Erie 2 BOCES

(716) 549-4454 • [www.e2ccb.org](http://www.e2ccb.org)

*Academic Programs for:*

- ▶ Licensed Practical Nurse
- ▶ Phlebotomist

### Erie Community College (ECC)

(716) 851-1455 • [www.ecc.edu](http://www.ecc.edu)

*Academic Programs for:*

- ▶ Health Information Technologist
- ▶ Medical Office Assistant
- ▶ Medical Lab Technician (MLT)
- ▶ Licensed Practical Nurse
- ▶ Registered Nurse
- ▶ Respiratory Therapist
- ▶ Surgical Technologist (jointly with NCCC)

### Jamestown Community College (JCC)

(800) 388-8557 • [www.sunyjcc.edu](http://www.sunyjcc.edu)

*Academic Programs for:*

- ▶ Health Information Technologist
- ▶ Nursing P.N.

### Job Corps Center - Cassadaga (income eligibility requirements)

(716) 595-8760 • <http://cassadaga.jobcorps.gov/vocations.aspx>

*Academic Programs for:*

- ▶ Certified Nurse's Aide (CNA)
- ▶ Licensed Practical Nurse (LPN)
- ▶ Pharmacy Technician

### Job Corps Center - Medina (income eligibility requirements)

(585) 798-7000 • <http://iroquois.jobcorps.gov/Home.aspx>

*Academic Programs for:*

- ▶ Certified Medical Assistant (CMA)
- ▶ Certified Nurse's Assistant (CNA)

Here's where to find more information on academic programs, scholarships, and tuition assistance for WNY's most in-demand jobs in health sciences.

## Niagara County Community College (NCCC)

(716) 614-6222 · [www.niagaracc.suny.edu](http://www.niagaracc.suny.edu)

*Academic Programs for:*

- ▶ Medical Assistant
- ▶ Phlebotomist
- ▶ Practical Nurse (Certificate)
- ▶ Registered Nurse
- ▶ Radiological Technologist
- ▶ Surgical Technologist (Buffalo & Sanborn Locations)

## SUNY at Fredonia

(800) 252-1212 · [www.fredonia.edu](http://www.fredonia.edu)

*Academic Programs for:*

- ▶ Medical Technologist (MT)
- ▶ Biomedical Research Technologist

## Trocaire College

(716) 826-1200 · [www.trocaire.edu](http://www.trocaire.edu)

*Academic Programs for:*

- ▶ Diagnostic Medical Sonographer (Ultrasonographer)
- ▶ Echocardiographer
- ▶ Health Information Technologist
- ▶ Medical Assistant
- ▶ Medical Coding & Reimbursement Specialist
- ▶ Licensed Practical Nurse
- ▶ Phlebotomist
- ▶ Radiological Technologist
- ▶ Registered Nurse
- ▶ Surgical Technologist

## UB - Educational Opportunity Center

(716) 849-6727 · [www.eoc.buffalo.edu](http://www.eoc.buffalo.edu)

*Academic Programs for:*

- ▶ Certified Nurse's Assistant (CNA)
- ▶ Medical Assistant
- ▶ Pharmacy Technician

## University at Buffalo

[www.buffalo.edu](http://www.buffalo.edu)

*Academic Programs for:*

- ▶ Medical Technologist (MT) / BioTechnologist  
(716) 829-5182
- ▶ Nuclear Medicine Technologist  
(716) 838-5889
- ▶ Registered Nurse  
(716) 829-2537

# Health Care & Health Sciences Partners

- ▶ Buffalo & Erie County Workforce Development Consortium, Inc.
- ▶ Buffalo & Erie County Workforce Investment Board, Inc.
- ▶ Canisius College
- ▶ Catholic Health
- ▶ Erie 1 BOCES
- ▶ Erie 2 BOCES
- ▶ Erie County Medical Center
- ▶ Erie Community College
- ▶ Jamestown Community College
- ▶ Kaleida Health
- ▶ Niagara County Community College
- ▶ Roswell Park Cancer Institute
- ▶ Trocaire College
- ▶ UB – Educational Opportunity Center
- ▶ University at Buffalo



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[www.rahec.myhealthcareer.org](http://www.rahec.myhealthcareer.org)

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**Buffalo & Erie County  
Workforce Investment Board, Inc.**

(716) 504-1480

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**iSciWNY™**  
[www.isciwny.com](http://www.isciwny.com)

*Elements used in this brochure courtesy of iSciWNY, Western New York's leading workforce development and education initiative for the Life Sciences industry.*