HEALTH CAREER PROGRAMS

Math requirements
Health Careers and Public Service Careers

- Diagnostic Medical Sonography
- Fire Science and EMT
- Nursing
- Nuclear Medicine Technology
- Ophthalmic Technician
- Radiologic Technology
- Surgical Technology
- LPN Upward Mobility
Take the **placement exams**

The Compass Placement Test is **mandatory** for all new students enrolling in credit courses.

You can review sample questions and test taking tips at [www.triton.edu/placementtesting](http://www.triton.edu/placementtesting).

**Please note,** you may waive the placement exams if you earned a proficient score in the English, Reading, and Math portion of the ACT. Please visit the testing website above for more information. If you have taken college courses, you must provide documentation of a grade of “C” or higher in college level English and math courses.
A strong knowledge of basic math skills is a key component in succeeding as a health care provider. Sonography requires an understanding in calculating the propagation of sound, wavelengths, frequencies and sound attenuation in order to create quality images in evaluating a structure or organ.

Math 110 (College Algebra) is required for this program or ACT of 23. Examines operations on real numbers, factoring, polynomials, rational expressions, complex numbers, etc.
Firefighters must have math skills to do hydraulic calculations for pumping water. There are also calculations for pressures, friction loss and adjustments for elevation so the proper pressures are sent through fire hoses. This ensures safety and proper flow in firefighting. For those looking to advance professionally, math skills are needed in master budgets and statistical reporting.

**Math 101 or 102 (Quantitative Literacy/Liberal Arts Mathematics)** or ACT of 23 within application is required. Topics in logic, consumer math, numeral systems, geometry in nature and in daily life, introductory stats and probability.
Emergency Medical Services programs require basic skills in math. They need to be able to calculate areas in patients with skin burns and drug calculations.

**Math 101 or 102 (Quantitative Literacy/Liberal Arts) Mathematics** required in Emergency Management degree.
In Nursing, math is used in medication administration, fluid balance, and nutritional calculations. Students must understand and compute basic algebraic calculations. Students will calculate the safe medication dose using ratio/proportion, formula, and/or dimensional analysis. Dosage calculations require students to convert units of measure, calculate dosage by weight, and calculate fluid and calorie maintenance, IV fluid calculation - volume/time in mL/hour and drops/minute and IV mass/time in minute or hourly rates.

Math 055 (Algebra) is required.
The Nurse Assistant (NAS) students need **Basic Math Skills**. They need to be able to do the following:

- multiply by two when taking a pulse or respiration.
- multiply by 12 and divide by 12 when measuring a height.
- multiply 30 cc's by ounces to give them an intake of fluids.
- add all cc’s to give a total intake.
- simple fractions and decimals  $\frac{1}{4} = .25, \quad \frac{1}{2} = .50, \quad \frac{3}{4} = .75$
A higher level of math is required in Nuclear Medicine. Understanding principles of radioactive decay- materials become less radioactive with time-for example how do you calculate a patient dose that has radioactive material in it prepared at 7:00am which will not be the same amount of radioactive material when it is used at 9:00am.

Involves algebra/ and use of log and exponents

Solving algebraic equation to calculate function for organ (systems) Statistical analysis to evaluate function of equipment

MAT110 (College Algebra) is required.
The OPH students need **Basic Math Skills** in order to do well in the program, but do need to know how to add/subtract numbers with different signs, solve for X, and do simple math calculations. There are a lot of numbers used in ophthalmology, but most require a fairly simple level of math skills.
Radiologic Technology requires a math skills in the calculations of X-ray machine techniques required to provide safe and accurate amounts of ionizing radiation to be given to the patients.

**Math 085 (Algebra and Geometry II)** required for program. This course examines concepts in signed numbers, factoring, equation solving, inequality solving, etc.
Surgical Technology

This profession prepares the student to help the surgeon, anesthesiologist and nurse with patient care, supplies and care of instruments used in the operating room.

**Basic Math skills** required in managing instruments and supplies in the operating room. Similar to other health professions, those interested in advancement within the profession need skills in budgets and scheduling within the department.
Thank you!