

What do I expect to learn in this class?

1. How arithmetic, algebra, logic, geometry and statistics can be used to solve problems arising in life and work.
2. How numbers play a role in everyday life.
3. How to estimate mathematical quantities as well as evaluate the accuracy of estimates, and adjust estimates when necessary.
4. How to make reasoned judgment using mathematical tools.
5. Mathematics is not about plugging numbers into equations or a calculator.

Some of the topics I will learn in this class**Logic.**

Logic, is a deductive reasoning that results when the human brain calculates the most rational and acceptable outcome of any given situation and recognizes that answer as the most constructive, and consequently the most desirable.

http://wiki.answers.com/Q/Why_is_logic_relevant_to_everyday_life

How do I use logic in real life? Every day we need to make choices, logic is that ability to examine the consequence of every possible action and then choose the best one.

Probability.

Aristotle said, "The probable is what usually happens." You can't predict the future, but you can use mathematical probability to determine how likely it is that something will – or won't -- happen. http://www.ehow.com/list_7719506_real-life-probability-examples.html

How do I use probability in real life? Many ways such as weather forecasting (what is the chance that it will rain tomorrow?), winning the lottery (there is a very low probability of winning!), playing the odds when you are buying health, car or life insurance...

Statistics.

Statistics is the study of data, how to acquire it, organize it, analyze it and represent it.

How do I use statistics in real life? Find the average score, average rain fall, analyze data and make predictions, understand graphs (such as bar graphs, histograms) in the newspapers and magazines....

Geometry.

The study of shapes, sizes, their properties and relative position

How do I use geometry in real life? Paint your room, install a new carpet, organize your closet, fence your garden, design a new video game...

Who uses math? (<http://www.mathguide.com/issues/whymath.html>)

Everybody uses math whether they realize it or not. **Shoppers** use math to calculate change, tax, and sales prices. **Cooks** use math to modify the amount a recipe will make. **Vacationers** use math to find time of arrivals and departures to plan their trips. Even **homeowners** use math to determine the cost of materials when doing projects.

How some professions use math? (<http://www.mathguide.com/issues/whymath.html>)

Accountants assist businesses by working on their taxes and planning for upcoming years. They work with tax codes and forms, use formulas for measuring interest, and spend a considerable amount of energy organizing paperwork.

Agriculturists determine the proper amounts of fertilizers, pesticides, and water to produce bountiful foods. They must be familiar with mixture problems.

Architects design buildings for structural integrity and beauty. They must know how to calculate loads for finding acceptable materials in design.

Biologists study nature to act in concert with it since we are so closely tied to nature. They use proportions to count animals as well as use statistics/probability.

Chemists find ways to use chemicals to assist us which entails purifying water, dealing with waste management, researching superconductors, analyzing crime scenes, making food products, ...

Computer Programmers create complicated sets of instructions called programs/software to help us use computers to solve problems. They must have strong logic skills.

Engineers (Chemical, Civil, Electrical, Industrial, Material) build products/structures/systems like automobiles, buildings, computers, machines, and planes, to name just a few examples. They cannot escape the frequent use of calculus!

Geologists use mathematical models to find oil and study earthquakes.

Lawyers argue cases using complicated lines of reason. That skill is nurtured by high level math courses. They also spend a lot of time researching cases.

Managers maintain schedules, regulate worker performance, and analyze productivity.

Medical Doctors must understand the dynamic systems of the human body. They research illnesses, carefully administer the proper amounts of medicine, read charts/tables, and organize their workload.

Meteorologists forecast the weather for agriculturists, pilots, vacationers, and those who are marine dependent.

Military Personnel carry out a variety of tasks ranging from aircraft maintenance to following detailed procedures.

Nurses carry out the detailed instructions doctors give them. They adjust intravenous drip rates, take vitals, dispense medicine, and even assist in operations, .

Politicians help solve the social problems of our time by making complicated decisions.

Technicians repair and maintain the technical gadgets we depend on like computers, TV's, VCR's, cars, refrigerators, ... They are always reading measuring devices, referring to manuals, and diagnosing system problems.

Tradesmen (carpenters, electricians, mechanics, and plumbers) estimate job costs and use technical math skills specific to their field. They deal with slopes, areas, volumes, distances and must have an excellent foundation in math.