

*Helpful Links:*

**<http://www.maa.org/careers/>**

**1.) Energy industry for technical and analytical positions:**

A.) **Companies that service energy industry:** oil companies, software companies, oil and gas investment banks, energy lending firms, engineering consultancies, etc.).

1.) These companies need employees who can analyze data, model future growth, calculate economics and are able to communicate their findings to an audience.

Most companies purchase commercial software for modeling future oil and gas production, but these sophisticated programs are best handled by mathematicians.

**2.) Careers that involve problem-solving and logic skills.**

**3.) Careers involving categorical proof theory, type theory, programming languages, logics for knowledge representation, logics of context, linear logic, intuitionistic modal logics and linguistic applications of logic.**

4.) **Consultant:** someone who provides expert advice, usually to another company or agency.

A.) Consulting for the Federal Government and other corporations, coworkers may obtain quantitative degrees such as: mathematics, statistics, quantitative finance, or computer science (in the range of BS to PhD).

1.) Work involved: building computer models, forecasting techniques, market research, statistical analysis and data mining (large amounts of data or building a mathematical model to estimate unknown values)

5.) **Actuarial Science:** Actuaries take a series of exams in order to be credentialed.

A.) The first three actuarial exams cover topics such as: statistics, calculus and life contingencies.

B.) The use of Algebra to Complex Calculus and Statistics, these are helpful in understanding different methodologies.

6.) **Statisticians and Analysts:** analysis of data, regardless of its source; application of mathematical and statistical concepts; formulation of valid conclusions.

7.) **Scientists:** Computational mathematics and problem solving skills are essential for the solution of various equations concerning multiple scientific areas. Ex: An understanding of the atmosphere requires the derivation and interpretation of complex equations that describe the fluid motion of gases, heat transfer, radiation, chemical interactions and reactions, and much more.

8.) **Instructors:** This can vary from teaching at the middle school level to the college level. Professors usually have expertise in either Pure or Applied mathematics, although, both can be closely related.

9.) **Programmers**

10.) **Mathematicians in Medical Science:** Mathematicians contribute to this area by creating mathematical models, clinical studies, software, and databases for innovative medical procedures and medical cures.

11.) **Employment in the Pharmaceutical Field**

12.) **A Career in Cryptography**