Engineers typically enter the occupation with a bachelor's degree in mathematics or an engineering specialty, but some basic research positions may require a graduate degree. Most engineering programs involve a concentration of study in an engineering specialty, along with courses in both mathematics and the physical and life sciences. Engineers offering their services directly to the public must be licensed. Continuing education to keep current with rapidly changing technology is important for engineers.

Much of chemical engineers’ mathematical work involves the planning and theoretical "modeling" of production processes, which takes place on a computer or in preliminary reports.

About 37 percent of engineering jobs are in the manufacturing industry. Twenty-eight percent of jobs are in professional, scientific, and technical services, primarily in architectural, engineering, and related services. Many engineers also work in the construction, telecommunications, and wholesale trade industries. Some engineers also work for federal, state, and local governments in highway and public works departments. Ultimately, the type of engineer determines the type of potential employer.

Chemical engineers use math frequently in the laboratory. They use advanced computer software to aid in their research and production processes to model theoretical synthesis techniques and properties of chemical compounds.

Citations
http://en.wikipedia.org/wiki/Chemical_engineering
http://www.bls.gov/oes/current/oes172041.htm