



## มหาวิทยาลัยวิทยาศาสตร์และเทคโนโลยีซานตง Shandong University of Science & Technology

### Chemical Engineering and Technology

#### 1. Education Objectives

The main education objectives of the major Chemical Engineering and Technology are to cultivate qualified personnel with advanced technology and engineering knowledge of chemistry to meet the requirement of modern chemical industry. In addition, they'll have great improvement of all-round morality, intellectuality and physical fitness for their future professional development. They'll receive engineering training on production of chemicals, materials, fuels, and pollution control, hence be able to contribute to chemical factories with design, construction, operation and management, and be capable of technology development and application research, etc.

#### 2. Requirements

The graduates should acquire the following knowledge and abilities.

- (1) They will have steady foundation in chemistry, mechanics and automatic control, etc. They are able to use Chinese to read Chinese books and magazines of their own specialty and have some skills such as listening, speaking, reading, writing and translation, etc.
- (2) They will grasp the basic theory and professional knowledge of engineering science required of their specialty. They will possess preliminary capability to use basic applied theory and knowledge to be engaged in the production of chemicals, materials, fuels and pollution control, and to analyze and solve practical problems on chemical engineering, and the potential for technological improvement, scientific development and applied research.
- (3) They will have fairly good abilities for experiment test, calculation and expression, and master document retrieval and other methods to acquire scientific and technological information.
- (4) They will have a better self-study and work adaptation capability, computer operation and application ability and innovative consciousness.
- (5) They will have insight and ability to apply systematic engineering ideas and modern operational knowledge to production and organization management.

#### 3. Main subjects and degree courses

Inorganic Chemistry, Analytical Chemistry, Organic Chemistry, Physical Chemistry, Functional Polymer, Instrumental Analysis, Chemical Experiments, Chemical Technology, Chemical Safety Engineering, Principles of Chemical Engineering, Chemical Equipment, Chemistry of Fine Chemical Production, Chemical Engineering Instrument & Automation, Oil Refinery Technology, Introduction to Environment Engineering, etc.

#### 4. What can you do with a major in Chemical Engineering and Technology?

Chemical engineers can specialize in production of chemicals, materials, fuels, and pollution control. They can move into other areas such as entrepreneurship and consulting. Another developing opportunity is in sales engineering. This involves the service and testing for various types of equipment in the industry.

#### 5. Further Study

Applicants with bachelor degree in chemical engineering enjoy an advantage when proceeding further study and applying for a master degree in the leading technological areas such as polymer material, environmental protection, energy engineering, petroleum processing, fertilizer industry, etc. One third of the undergraduates can be admitted to master degree program. Those who have excellent performance during undergraduate study can excuse from examination and directly go on postgraduate study.