Department of Energy and Refrigerating Air-Conditioning Engineering

Introduction

This department is a newly established department. It has been recruiting students since summer 2022. We sincerely welcome you. In view of the fact that energy utilization, energy conservation and environmental protection issues have become prominent, in line with world's promotion of green energy industry policy and refrigerating air-conditioning technology plays an important role in the energy field, considering the education and lack of energy and refrigerating air-conditioning talents in the real industry, in response to industrial changes and satisfaction to meet the needs of talents in the industry, shorten the gap between learning and use, and improve the employability of students. The curriculum planning of the department strengthens the use of school and enterprise resources, cultivates practical technical talents required by the industry, and guides students to enter the workplace smoothly through practical courses, industry-teacher collaborative teaching, and semester (off-campus) internships, so as to shorten the study period. Gap and the educational goal of providing practical technical talents. To sum up, this department cultivates local professional technical and engineering talents, adheres to the core concept of technical and vocational education, grasps the development trend of science and technology and industry, and cultivates middle and senior students with superb academic skills, both skills and morals, independent and enterprising, dedicated and happy. Professional talents, expect to accelerate scientific and technological development, promote industrial upgrading, and strengthen national competitiveness. The department will combine core technologies such as energy technology and refrigeration and air-conditioning engineering to cultivate talents with both theory and practice. Implement educational strategies that focus on basic theory, emphasize practical teaching, and cultivate students' habit of continuous learning, training the ability to independently engage in research and development and the development of innovative potential.

Academic and Educational Development

Smart Energy, Smart Cold Chain, Air Conditioning Technology

Faculty of the Department

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Four-Year Program

Required Courses, 69 credits. Credits and Hours First year:

Calculus (1) 3 3 Calculus (2) 3 3 Physics (1) 3 3 Physics (2) 3 3 Computer Aided Mechanical Drawing 1 3 Introduction to Energy and Refrigeration and Air Conditioning 2 2 Computer Programming 2 3 Electrical Engineering 3 3 Engineering Mechanics 3 3

Second year:

Engineering Mathematics (1) 3 3 Engineering Mathematics (2) 3 3 Numerical Analysis 3 3 Engineering Analysis and Practice 3 4 Thermodynamics 3 3 Principles of Refrigeration and Air Conditioning 3 3 Fluid Mechanics 3 3 Heat Transfer 3 3 Electrical Machinery 3 3 Fluid Machinery 3 3

Third year:

Practical Topics (1) 1 3 Practical Topics (2) 1 3 Energy Engineering practice 1 3 Refrigeration Engineering practice 1 3 Air Conditioning Engineering practice (1) 1 3 Air Conditioning Engineering practice (2) 1 3 Refrigeration and Air Conditioning Automatic Control practice 1 3 Air Conditioning Engineering and Design 3 3 Refrigeration Engineering and Design 3 3 Refrigeration and Air Conditioning Automatic Control 3 3

Forth year: non

Elective Courses, 31 credits Course content may be adjusted

Energy Materials 3 3 Introduction to Productivity 4.0 3 3 Wind Energy and Wind Power Generation Technology 3 3 Solar Photovoltaic Technology 3 3 Heat Exchanger Design 3 3 Refrigeration and Air Conditioning Engineering Planning and Management 3 3 Boiling Heat Transfer and Two-Phase Flow 3 3 Green Building Energy Saving Design 3 3 Industrial Safety and Health 3 3 Advanced Computer Aided Mechanical Drawing 1 3 Control Theory 3 3 Summer Internship 2 320 Food Refrigeration Technology 3 3 Fuel Cells 3 3 Special Air Conditioning Systems 3 3 Clean Room Design 3 3 Manufacturing Procedures 2 2 Engineering Materials 3 3 Frequency conversion energy saving technology 3 3 Cryogenic engineering 3 3 Energy storage technology 3 3 Heat pump technology application 3 3 Circulation

cold chain management 3 3 Energy application and motive power field 3 3
Refrigeration application technology 3 3 S emester practice (1) 9 9
Semester practice (2) 9 9