

Training objectives	Expected learning outcomes of the curriculum	Corresponding module
<p>Possess the ability to apply knowledge of mathematics, natural sciences, engineering, and economic management to conduct comprehensive analysis and research on complex chemical engineering problems in the field of chemical engineering and propose solutions.</p>	<p>Knowledge: Mastery of fundamental knowledge in mathematics, natural sciences, information technology, and computer-related fields.</p> <p>Skills: The ability to apply mathematical knowledge to understand and appropriately express engineering practical problems, and to establish basic models to solve various practical problems in technology and engineering applications.</p> <p>Competences: The ability to observe, analyze, and solve technical problems using the perspectives and thinking methods of mathematics and information technology. Based on the characteristics of mathematics and information technology, one can conduct continuous analysis, synthesis, calculation, judgment, and reasoning on engineering phenomena, thereby solving engineering problems..</p>	<p>Innovation Entrepreneurship College Students Computer Computer Language Higher Mathematics A Linear Algebra Probability Theory and Mathematical Statistics University Physics Electrical and Electronic Technology Inorganic Chemistry A Inorganic Chemistry Experiment A Organic Chemistry Organic Chemistry Experiment A Analytical Chemistry Analytical Chemistry Experiment Physical Chemistry A Physical Chemistry Experiment B Instrument Analysis Instrument Analysis Experiment</p>

		<p>Biochemistry</p> <p>Biochemical Experiment</p> <p>Chemical Principle</p> <p>Chemical Principle Experiment</p> <p>Chemical Principle Simulation Experiment</p> <p>Chemical Reaction Engineering</p> <p>Chemical Engineering Professional Experiment</p> <p>Chemical Engineering Thermodynamics</p> <p>Chemical Separation Engineering</p> <p>Chemical Process Engineering</p> <p>Chemical Engineering Drawing</p> <p>Chemical Design A</p> <p>Chemical Safety and Environmental Protection</p> <p>Introduction to Chemical Engineering</p> <p>Chemical Process Analysis and Synthesis</p> <p>Fundamentals of Chemical Equipment Mechanics</p>
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<p>With a solid grounding in the humanities and social sciences, as well as professional ethics in engineering and a sense of social responsibility, one should be able to comprehensively consider social, safety, and environmental protection factors in the design and implementation of chemical engineering projects, and actively practice the core</p>	<p>Knowledge: Master the knowledge of modern Chinese history, the basic principles of Marxism, patriotism, humanistic spirit, physical education, and military training.</p> <p>Skills: Understand social phenomena, pay attention to and adapt to social development, possess the ability to communicate and collaborate with others, exhibit team spirit, and promote physical and mental health and self-improvement.</p> <p>Competences: Develop a sound personality and good psychological qualities, hold a correct worldview, values, moral views, and legal perspectives, and possess cultural literacy and a sense of social</p>	<p>Ideological and Moral Education and Rule of Law</p> <p>Outline of Modern and Contemporary Chinese History</p> <p>Basic Principles of Marxism</p> <p>Mao Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics</p> <p>Current Situations and Policies</p> <p>Career Development and Employment Guidance for College Students</p> <p>Chemical Engineering Design A</p>

socialist values.	responsibility.	Chemical Safety and Environmental Protection Metalworking Practice A Electrical and Electronics Practice A Chemical Engineering Recognition Internship Chemical Production Internship
To possess the innovative capability to analyze and optimize chemical processes, and to solve complex engineering problems, is essential for engaging in engineering practice related to chemical engineering design, production operations, technology development, and management, as well as participating in related business activities. This	<p>Knowledge: Master professional knowledge in chemical engineering and technology, particularly in the design of processes related to chemical reactions and separation processes.</p> <p>Skills: Possess specialized knowledge to analyze and solve practical problems in chemical engineering and technology, design chemical reaction processes that meet specific needs, and provide solutions for complex chemical reaction engineering problems, including prediction and simulation of complex chemical engineering and technology issues.</p> <p>Competences: Master comprehensive knowledge in system design, diagnosis, energy</p>	Foundations of Innovation and Entrepreneurship Basic Computer Science for College Students Computer Languages College Physics Laboratory Inorganic Chemistry Laboratory A Organic Chemistry Laboratory A Analytical Chemistry Laboratory Physical Chemistry Laboratory B Biochemistry Laboratory Instrumental Analysis Laboratory Instrumental Analysis Laboratory Chemical Engineering Principles Laboratory A

<p>involves considering and evaluating the impact on the environment and social sustainability, with the aim of becoming a key player in production management, technology research and development, process design management, and analysis and testing within the field of chemical engineering..</p>	<p>saving and optimization, operation, and management in chemical engineering and technology. Able to analyze and evaluate practical problems using engineering background knowledge, understand its limitations, demonstrate innovative awareness in the design phase, and provide valuable solutions.</p>	<p>Chemical Engineering Principles Simulation Laboratory Chemical Reaction Engineering Professional Chemical Engineering Laboratory Chemical Engineering Design A Chemical Process Analysis and Synthesis Chemical Technology Economics Chemical Engineering Principles Course Design Chemical Engineering Design B Comprehensive Training in Chemical Engineering Graduation</p>
<p>To possess good personal and team collaboration skills, and to be able to communicate and interact effectively with peers in the chemical industry, related sectors, or the</p>	<p>Knowledge: Master a foreign language and pass the National College English Test Band 4, acquiring core knowledge in English. Skills: Read professional literature in English and communicate and discuss professional issues with others in the language.</p>	<p>Military Theory for College Students College Physical Education and Health College English Professional English and Literature Retrieval B Practical Writing Orientation Education and</p>

<p>general public.</p>	<p>Competences: Possess comprehensive expertise in the English specialty, enabling work in relevant national fields and the ability to conduct cross-cultural communication.</p>	<p>Military Training Comprehensive Training in Chemical Engineering Graduation</p>
<p>To cultivate an international perspective, continuously expand one's knowledge structure, enhance professional skills in chemical engineering, and improve overall quality, while possessing the ability for lifelong learning.</p>	<p>Knowledge: Master specialized knowledge in cutting-edge fields related to design. Skills: Broaden professional knowledge, stay abreast of trends in professional and related fields, and develop the capacity for knowledge accumulation and in-depth study. Competences: Cultivate comprehensive qualities in interdisciplinary fields related to this course, and be capable of applying learned professional knowledge in a broad range of applications.</p>	<p>Current Situations and Policies Mental Health for College Students Career Development and Employment Guidance for College Students Chemical Production Internship Comprehensive Training in Chemical Engineering Graduation</p>