

Environmental Engineering (3+2 SCUT-UWA Program)

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Engineering Knowledge: Be able to use basic knowledge of mathematics, natural sciences, relevant engineering fundamental theories and expertise to develop solutions for complex engineering problems.

3. Design/Development of Solutions: Be able to design solutions for complex engineering problems, as well as systems, units innovation, and take due account of factors such as society, health, safety, laws, culture and environment.

5. Use of Modern Tools: Be able to develop, select, and apply appropriate technologies, resources, and modern engineering and information technology tools aiming at complex environment and engineering problems, including prediction, modeling and recognition of the limitations of complex engineering problems.

6. Engineering and the Society: Be able to perform sound analyses based on engineering-related background knowledge, evaluate the social, health, safety, legal, and cultural impacts of environmental science and engineering practices and solutions to complex environmental problems, and understand the responsibilities involved.

7. Sustainable Development of Society and Environment: Be able to understand and evaluate the impact of professional engineering practice for complex environmental science and engineering problems on sustainable development of society and environment.

8. Professional norms: Have humanities and social sciences qualities, social responsibility, be able to understand and comply with the ethics and norms of the engineering profession and fulfill the responsibilities in the practice of environmental science and engineering.

9. Individual and Collaborative Team Work: Be able to effectively play a role as an individual, member or leader against a multidisciplinary background.

. Communication: Be able to effectively communicate and exchange complex environmental science and engineering issues with industry peers and the general public, including report and document writing, presentations, clear expression, or response to instructions, and possess a certain international perspective, be able to communicate and exchange in a cross-cultural background.

Master a foreign language and be able to apply it against the background of environmental engineering.

ble to effectively communicate and exchange complex environmental engineering issues with industry peers and the general public through oral and written methods.

ble to communicate and exchange in a cross-cultural background, with a certain international perspective.

ble to express personal thoughts on current international hot issues related to environmental engineering profession.

11. Project Management: Understand and master the principles of engineering management and economic decision-making methods, and be able to apply them in a multi-disciplinary environment.

Master the basic principles and methods of engineering management.

Master the basic theories and methods of economic decision-making in engineering.

ble to apply the principles of engineering management and economic decision-making methods to professional engineering practice.

12. Continuous Lifelong Learning: Possess awareness of self-directed and lifelong learning and

the ability to constantly learn and adapt to development.

12.1 Establish the concept of the importance of lifelong learning for self-development.

12.2 Be able to continuously conduct self-learning and self-exercise through appropriate approaches and methods.

12.3 Be able to demonstrate the achievement through self-learning and pave the way for lifelong learning.

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The Environmental Engineering (3+2 SCUT-UWA Program) was established in 2017 through a collaborative partnership with the University of Western Australia (UWA). Under this framework, students complete their first three years of study within the Environmental Engineering (All-English Program) at South China University of Technology (SCUT). Those who fulfill ge proficiency standards by the end of the third year are eligible to transfer to UWA for the remainder of their studies. Upon satisfying the

Undergraduate Graduat

This joint program is built upon the robust foundation of the Environmental Engineering major, which began undergraduate enrollment in 1998. The discipline has earned multiple recognitions, including designation as a Characteristic Specialty Construction Site in Guangdong Province in 2010 and a National First-Class Undergraduate Program Construction Site in 2020. It has also successfully passed National Engineering Education Professional Certification on three

occasions in 2011, 2014, and 2017.

The program is supported by a first-level doctoral program in Environmental Science and Engineering, a Guangdong Provincial First-Class Key Discipline, and more than ten research platforms at or above the provincial-ministerial level. These include the National Engineering Laboratory for Volatile Organic Pollutants Control Technology and Equipment, the Key Laboratory of Pollution Control and Ecological Restoration in Industrial Agglomeration Areas under the Ministry of Education, and the Guangdong Provincial Key Laboratory of Atmospheric Environment and Pollution Control.

Teaching and research facilities encompass a total laboratory area of 1,000 square meters, housing specialized instructional laboratories in areas such as water pollution control engineering, atmospheric pollution control engineering, solid waste treatment and disposal, environmental engineering microbiology, physical pollution control, environmental monitoring, industrial wastewater treatment, environmental analysis, and ecological restoration. The laboratories are rationally configured and equipped with advanced instrumentation, including high-performance liquid chromatography, gas chromatography, ion chromatography, ultraviolet spectrophotometers, and atomic absorption spectrophotometers, with a total asset value exceeding RMB 7.3 million.

In addition, the program maintains 13 off-campus practical training bases, including the Guangzhou Development Zone Water Purification Center, Guangzhou First Thermal Resources General Plant (Likeng Waste Incineration Plant), Guangzhou Shijing Sewage Treatment Plant, and Huangpi Water Purification Plant.

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General Education & Basic Courses								
		10.0	160					
		54.5	1016					
		10.5	168					
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	117.0+26.0=143.0							

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	Total									
Elective Courses										
	069100693									
	Total		E							

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Course No	Course Title	C/E	Total Curriculum Hours	Credits	Semester
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				Lecture Hours		
069100241		C	week			
030100702		C	weeks			
069100301		C	weeks			
069100111		C	weeks			
		C	weeks			
069102051		C	weeks			
069100251		C	weeks			
069100841		C	weeks			
069101371		C	weeks			
069100473		C	weeks			
Total		C				